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C A L D W E L L

January 28, 2003

Mr. Steven Hariri, P.E.
Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, California 90013

12/22946-100

Subject: Semi-Annual Groundwater Sampling Report - January 2003
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Dear Mr. Hariri:

On behalf of Jervis B. Webb Company of California (Webb of California), Brown and Caldwell is submitting this semi-annual report for environmental activities completed at 5030 Firestone Boulevard and 9301 Rayo Avenue, South Gate, California (site) (Figure 1). This report summarizes the activities, including groundwater monitoring and sampling performed at the site, completed on December 27, 2002 and January 10, 2003.

BACKGROUND

Numerous subsurface investigations have been performed at the subject site since 1998. Erler and Kalinowski, Inc. (EKI) completed several investigations at the site between 1998 and 2001 that included nine CPT borings, 37 soil gas probe locations, 19 soil borings, nine PIPP groundwater samples, five groundwater monitoring wells, and collection and analysis of 78 soil samples. Additionally, EKI operated and maintained a soil vapor extraction (SVE) system at the site from March 2000 until October 2001 removing approximately 177 pounds of volatile organic compounds (VOCs) from the soil, primarily trichloroethylene (TCE).

IT Corporation advanced five soil borings to determine how effectively the SVE system had removed soil contamination. IT Corporation collected 40 additional soil samples, and analyzed them for VOCs. Subsequently, IT Corporation submitted a Soil Closure Report dated October 3, 2001 to the RWQCB and obtained soil closure for the site in a letter issued by the RWQCB dated January 23, 2002.

Quarterly groundwater sampling has been conducted at the site by EKI from March 1998 until June 2001. The RWQCB authorized a reduction in sampling frequency from quarterly to semi-annually in a letter dated November 8, 2001. IT Corporation conducted the first semi-annual sampling event in January 2002. The second semi-annual sampling event was conducted by Brown and Caldwell on July 2, 2002.

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The current groundwater sampling event was performed on December 27, 2002 and January 10, 2003 by Brown and Caldwell. Groundwater elevation measurements, groundwater quality data, and analytical results for the current and historic sampling events are provided in Tables 1 & 2 and Appendix A of this report.

COMPLETED SCOPE OF WORK

The scope of work performed during this reporting period included collection and analysis of water samples from groundwater monitoring wells located on and off-site (Figure 2) using passive diffusion bags (PDBs). Groundwater sampling using PDBs was approved by the Los Angeles Regional Water Quality Control Board in correspondence dated January 2002. All work was performed under the supervision of a California Registered Geologist. Work was performed under a site-specific health and safety plan (HASP) prepared by Brown and Caldwell.

GROUNDWATER SAMPLING

The semi-annual groundwater monitoring and sampling event was performed by Brown and Caldwell personnel on December 27, 2002 and January 10, 2003. The December field activities included depth-to-water measurements, total well depth measurements, and the installation of PDBs in groundwater monitoring wells MW-1 through MW-5 (Figure 2). The PDBs were provided by the laboratory, Columbia Analytical Services (Columbia), pre-filled with deionized water. The bags were suspended at the target depth in their respective wells (one bag per well). The target depths were suspended at either the middle or bottom of the wells and were determined based on the highest concentrations reported during the previous PDB groundwater sampling event conducted by IT. The PDBs remained in monitoring wells MW-1 through MW-5 for two weeks, thus allowing them to equilibrate with the surrounding groundwater in the wells. The January field activities included the collection of groundwater samples from the PDBs in wells MW-1 through MW-5. The laboratory analytical results of the groundwater samples are provided in Appendix A of this report.

Prior to the installation of the PDBs, depth-to-water and total well depth were measured in each well to the nearest hundredth of a foot using an electronic water level indicator. The probe was decontaminated between wells with Alconox™ detergent solution and tap water rinse followed by a final rinse with deionized water. The surveyed north side of the top edge of each well was used as a measuring point reference.

A total of 6 groundwater samples (including 1 duplicate) were collected on January 10, 2003. At the time of sampling, the PDBs were removed from the wells and groundwater samples were collected directly from the PDBs. The groundwater samples were containerized in pre-cleaned laboratory supplied bottles.

All samples were labeled with the site location, sample identification number, date and time of collection, sampler's initials, and logged on a chain-of-custody form. For laboratory quality control purposes, one duplicate sample (MW-1-69'-D) from MW-1 was collected during the groundwater-sampling event. Two trip blank samples were also submitted to the laboratory with the collected samples and they were placed on hold pending the results of the groundwater samples. All samples were stored in an ice-chilled cooler at approximately 4 degrees Celsius. The groundwater samples were submitted to Columbia, a California certified laboratory, under Brown and Caldwell chain-of-custody protocols.

Groundwater samples were analyzed for VOCs using United States Environmental Protection Agency (USEPA) method 8260B.

RESULTS

Site Hydrogeology

Groundwater elevations within each well (MW-1 through MW-5) were monitored on December 27, 2002. Groundwater elevations ranged from 46.86 feet above mean sea level (ft. msl) in well MW-2 to 48.50 ft. msl in well MW-3. The water surface elevations recorded during the December 2002/January 2003 sampling event indicate the potentiometric surface has dropped in elevation since the July 2002 semi-annual event, with an average decrease of 1.29 feet. The water surface elevation in all five wells has decreased since July 2002 with a maximum decrease of 1.86 feet observed in well MW-3.

The direction of groundwater flow on December 27, 2002 was southeasterly, which is consistent with previous sampling events. Figure 3 depicts the groundwater potentiometric surface on December 27, 2002. The gradient averages approximately 0.54 vertical feet per 100 lateral feet (0.0054 ft/ft). Depth to groundwater and groundwater elevations for the monitoring wells are presented in Table 1.

Groundwater Sampling

VOCs. Groundwater samples collected from all five wells (MW-1 through MW-5) were analyzed for VOCs. Current and historical analytical data from previous sampling events are presented in Table 2. Detected concentrations of trichloroethylene (TCE) from the current event are similar to those reported during previous events and ranged from less than 0.5 micrograms per liter ($\mu\text{g/l}$) in MW-4 to 24,000 $\mu\text{g/l}$ in MW-1. Figure 4 represents a map of TCE concentrations from the January 2003 sampling event. Based on this data, the TCE plume size and shape have remained stable since groundwater sampling commenced in 1998. Various chlorinated VOC degradation compounds were detected in the five wells, including cis-1,2-DCE (high of 320 $\mu\text{g/l}$ in MW-5), trans-1,2-DCE (high of 10 $\mu\text{g/l}$ in MW-3), and 1,1-DCE (high of 31 $\mu\text{g/l}$ in MW-3). An additional VOC, benzene was detected at 0.64 $\mu\text{g/l}$ in MW-4 during the January 2003 semi-annual sampling event.

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A summary of the VOC analytical results from the December 2002/January 2003 semi-annual sampling event is presented in Table 2. A copy of the laboratory analytical report and chain-of-custody form is presented as Attachment A.

SUMMARY

The following provides a summary of results based on data collected during the January 2003 semi-annual sampling event:

- Five existing groundwater monitoring wells were sampled and analyzed for VOCs.
- Groundwater surface elevations have decreased an average of 1.29 feet since the last sampling event.
- Groundwater flow direction is to the southeast, which is consistent with previous sampling events.
- The TCE plume size and shape remains consistent with previous sampling events, suggesting the plume is stable.

FUTURE SAMPLING

Based on data from the January 2003 semi-annual sampling event and previous sampling events which suggests plume stability, annual sampling for VOCs will be conducted using PDBs.

If you have any further questions, please do not hesitate to contact me at (949) 260-6146.

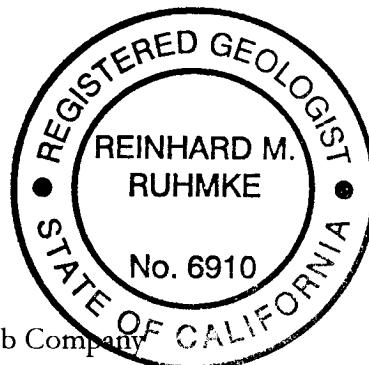
Very truly yours,

BROWN AND CALDWELL



Reinhard Ruhmke, R.G., C.HG.
Principal Geologist

cc: Michael Farley – Jervis B. Webb Company
Project file



Encl. Figures 1-4
Tables 1 and 2
Appendix A: Laboratory Analytical Reports and Chain of Custody Forms

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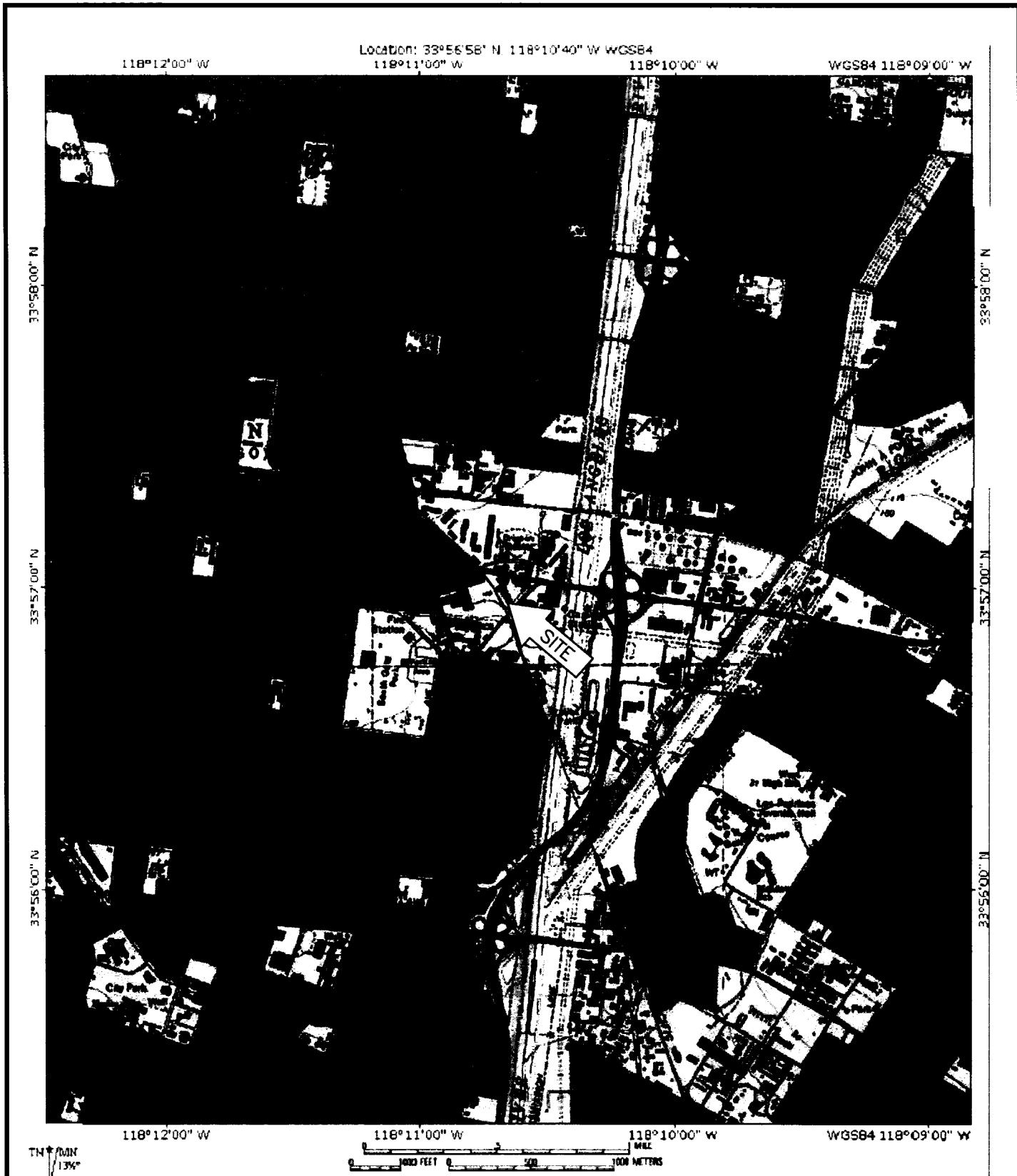
References

Brown and Caldwell, 2002, Semi-Annual Groundwater Sampling Report – July 2002,
5030 Firestone Boulevard and 9301 Rayo Avenue, South Gate, California,
Consultant Report dated January 22, 2003.

The IT Group 2002, IT Corporation, Semi-Annual Groundwater Sampling Report – First Semester 2002, Jervis B. Webb Company of California, South Gate, California,
Consultant Report dated February 28, 2002.

The IT Group 2001, IT Corporation, Soil Closure Report, Jervis B. Webb Company of California, South Gate, California, SLIC File No. 744, Consultant Report dated October 3, 2001.

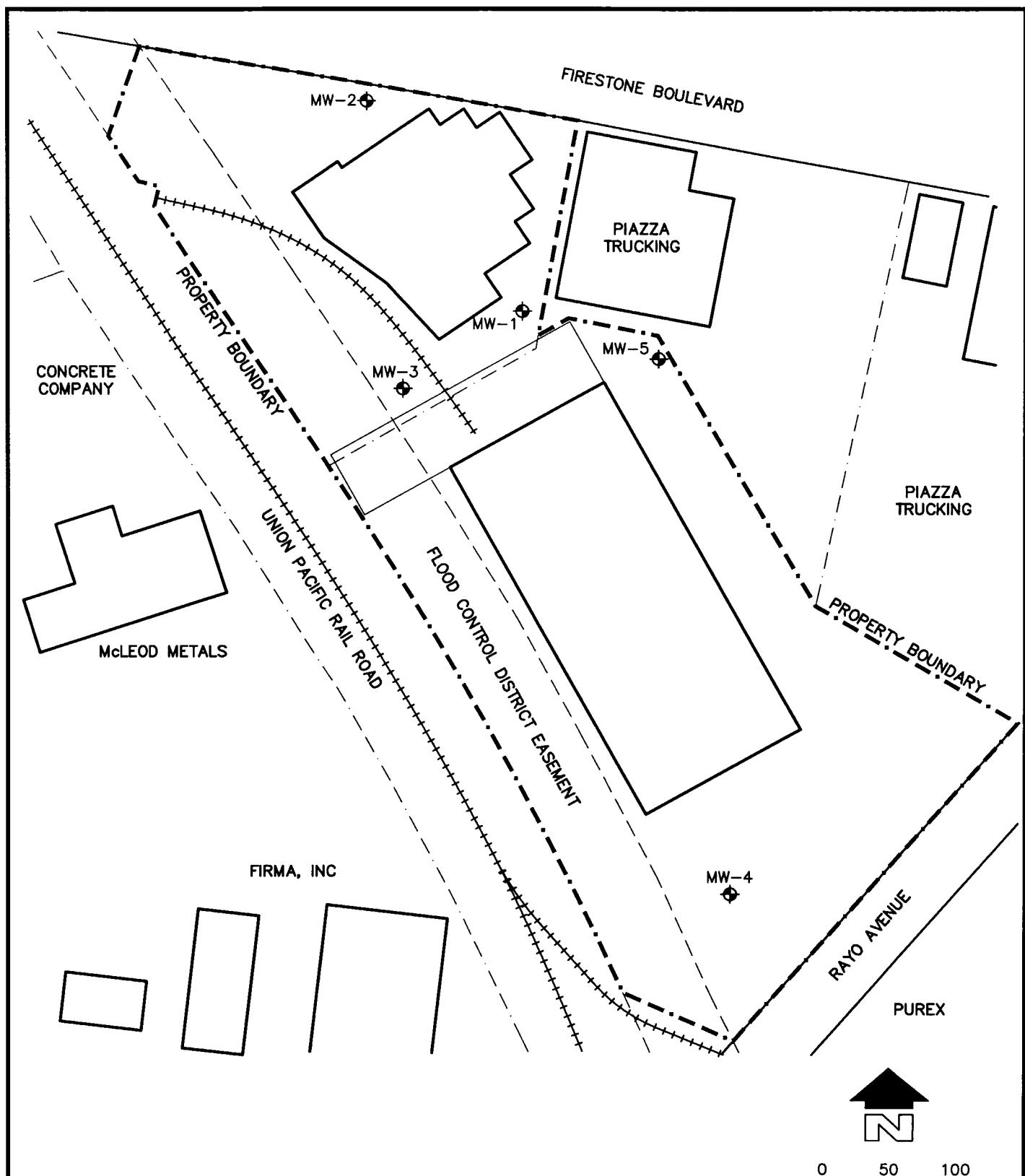
FIGURES



EAS - CAD\22946\22946-SL

DATE JAN 2003	PROJECT NUMBER 22946	SITE LOCATION	
BROWN AND CALDWELL IRVINE, CALIFORNIA	PROJECT LOCATION JERVIS B. WEBB COMPANY OF CALIFORNIA 5030 FIRESTONE BOULEVARD/9301 RAYO AVENUE SOUTH GATE, CALIFORNIA	FIGURE 1	

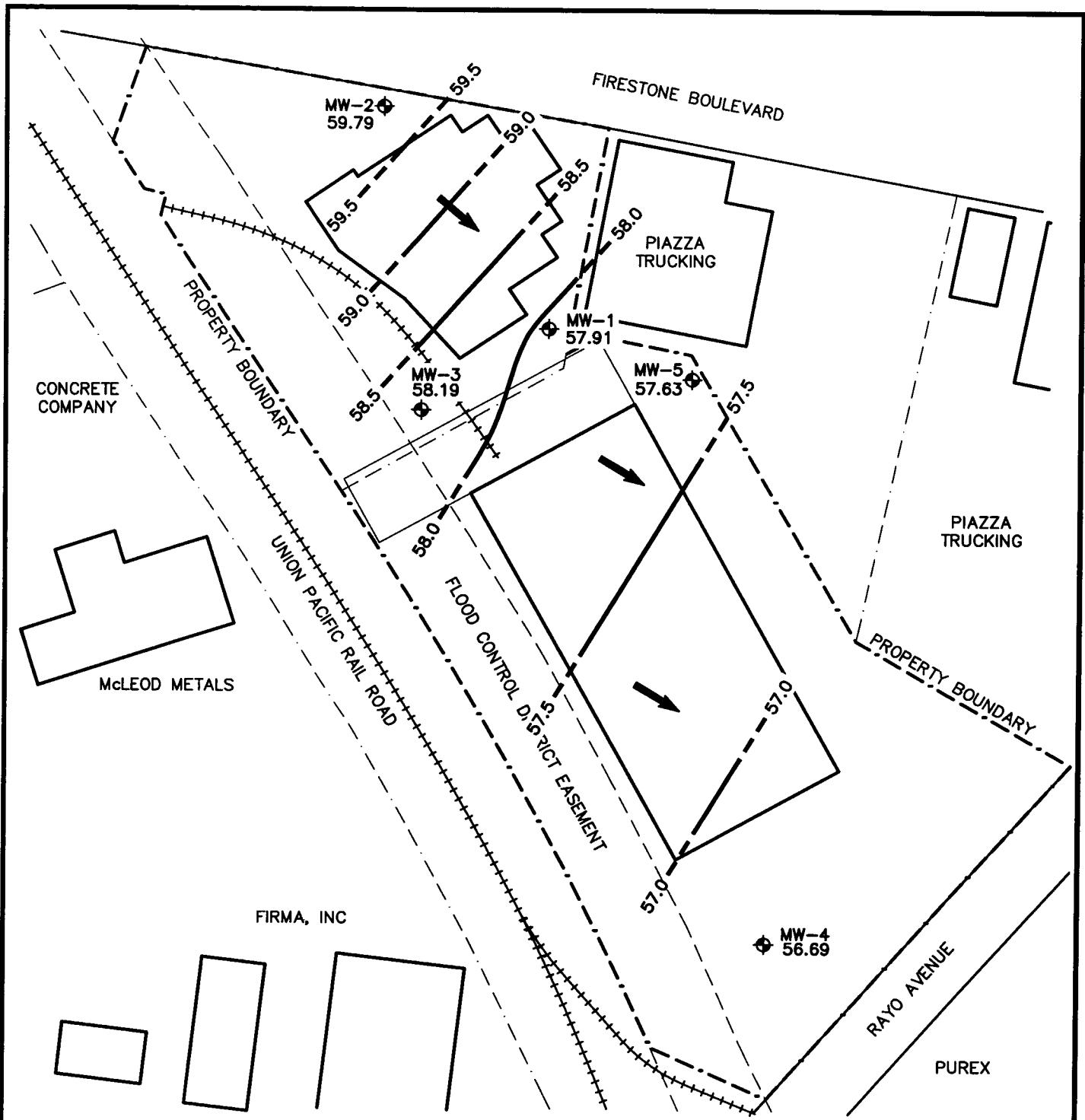
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DATE JAN 2003	PROJECT NUMBER 22946	SITE PLAN	
BROWN AND CALDWELL IRVINE, CALIFORNIA	PROJECT LOCATION JERVIS B. WEBB COMPANY OF CALIFORNIA 5030 FIRESTONE BOULEVARD/9301 RAYO AVENUE SOUTH GATE, CALIFORNIA	FIGURE 2	

000008



LEGEND

57.0 - - - GROUNDWATER CONTOUR LINE
(FEET ABOVE MEAN SEA LEVEL)

← GROUNDWATER FLOW DIRECTION

MW-4 ♦ MONITORING WELL LOCATION AND
DESIGNATION

59.79 GROUNDWATER ELEVATION
(FEET ABOVE MEAN SEA LEVEL)

0 50 100
SCALE IN FEET



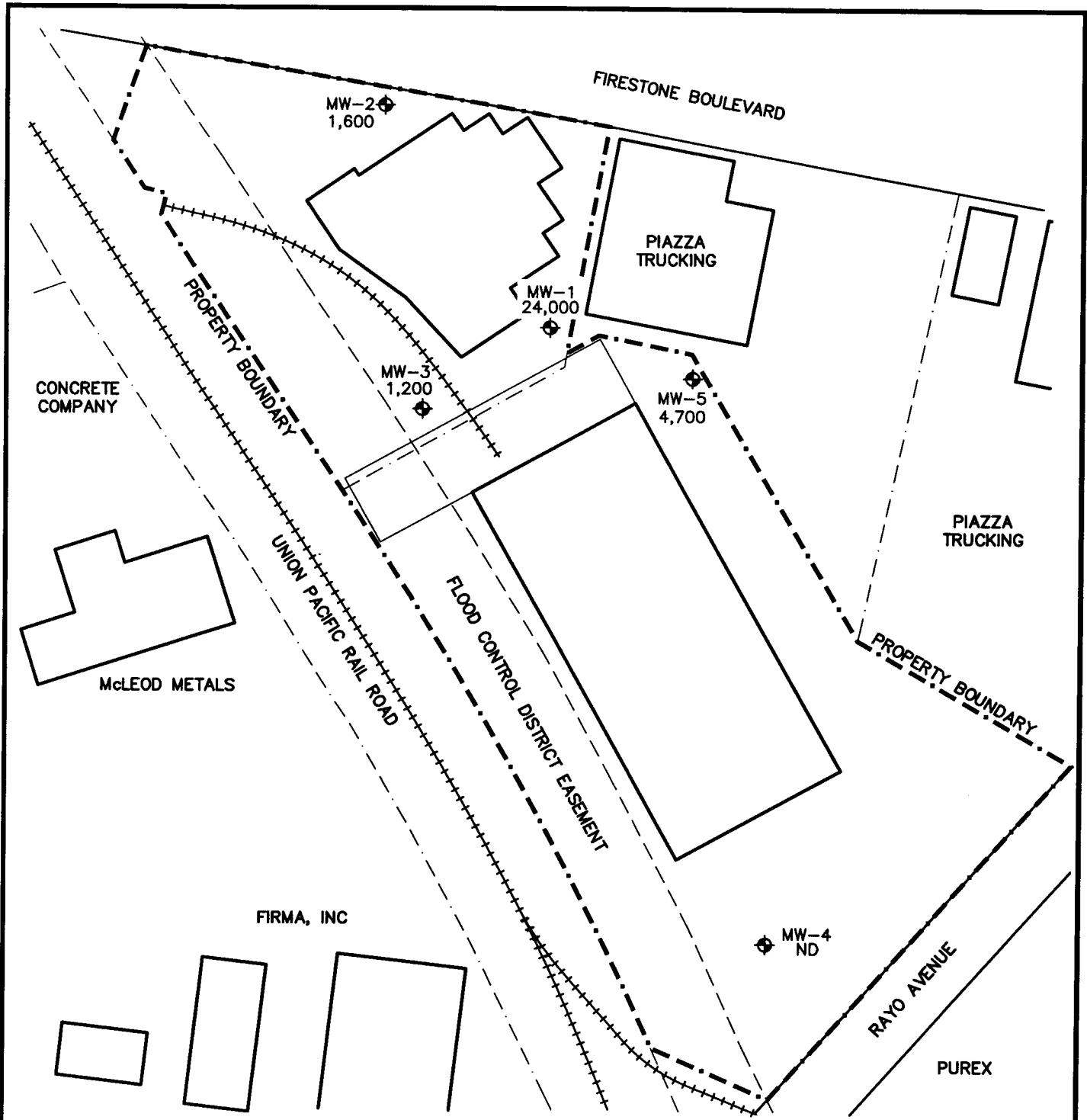
DATE JAN 2003	PROJECT NUMBER 22946
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**GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS
DECEMBER 2002**

BROWN AND
CALDWELL
IRVINE, CALIFORNIA

PROJECT LOCATION
JERVIS B. WEBB COMPANY OF CALIFORNIA
5030 FIRESTONE BOULEVARD/9301 RAYO AVENUE
SOUTH GATE, CALIFORNIA

FIGURE
3



LEGEND

MW-4 MONITORING WELL LOCATION AND DESIGNATION

1,200 TRICHLOROETHENE CONCENTRATION ($\mu\text{g}/\text{L}$)



0 50 100

Scale: 1 inch = 100 feet

DATE JAN 2003	PROJECT NUMBER 22946	TCE CONCENTRATION MAP JANUARY 2003	
BROWN AND CALDWELL IRVINE, CALIFORNIA	PROJECT LOCATION JERVIS B. WEBB COMPANY OF CALIFORNIA 5030 FIRESTONE BOULEVARD/9301 RAYO AVENUE SOUTH GATE, CALIFORNIA	FIGURE 4	

TABLES

Table 1.
Groundwater Elevations in Monitoring Wells
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft. msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-1	02/27/98	106.09	44.79	61.30	
	03/02/98	106.09	44.82	61.27	
	03/04/98	106.09	44.58	61.51	
	04/08/98	106.09	44.57	61.52	
	05/20/98	106.09	43.99	62.10	
	10/08/98	106.09	43.38	62.71	
	11/05/98	106.09	43.14	62.95	
	12/21/98	106.09	43.37	62.72	
	01/19/99	106.09	43.26	62.83	
	02/03/99	106.09	42.98	63.11	
	03/30/99	106.09	43.22	62.87	
	06/01/99	106.09	43.48	62.61	
	07/29/99	106.09	43.82	62.27	
	09/01/99	106.09	43.76	62.33	
	09/23/99	106.09	44.03	62.06	
	10/18/99	106.09	44.43	61.66	
	12/08/99	106.09	44.55	61.54	
	01/27/00	106.09	44.40	61.69	
	02/28/00	106.09	44.34	61.75	
	03/15/00	106.09	44.06	62.03	
	04/13/00	106.09	44.73	61.36	
	05/18/00	106.09	44.58	61.51	
	06/20/00	106.09	44.60	61.49	
	07/13/00	106.09	45.17	60.92	
	08/17/00	106.09	45.30	60.79	
	09/07/00	106.09	45.15	60.94	
	10/26/00	106.09	45.87	60.22	
	11/21/00	106.09	45.60	60.49	
	12/05/00	106.09	45.72	60.37	
	01/04/01	106.09	45.67	60.42	
	02/22/01	106.09	45.43	60.66	
	03/08/01	106.09	45.09	61.00	
	04/24/01	106.09	45.75	60.34	
	06/05/01	106.09	45.52	60.57	
	01/14/02	106.09	46.02	60.07	
	07/02/02	106.09	46.95	59.14	
	12/27/02	106.09	48.18	57.91	

Table 1 (Cont'd).
Groundwater Elevations in Monitoring Wells
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft. msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-2	02/27/98	106.65	44.02	62.63	
	03/02/98	106.65	44.06	62.59	
	03/04/98	106.65	44.13	62.52	
	04/08/98	106.65	NR		Truck parked on well
	05/20/98	106.65	43.51	63.14	
	10/08/98	106.65	42.84	63.81	
	11/05/98	106.65	42.64	64.01	
	12/21/98	106.65	42.69	63.96	
	01/19/99	106.65	42.66	63.99	
	02/03/99	106.65	42.55	64.10	
	03/30/99	106.65	42.63	64.02	
	06/01/99	106.65	42.91	63.74	
	07/29/99	106.65	43.13	63.52	
	09/01/99	106.65	43.14	63.51	
	09/23/99	106.65	43.35	63.30	
	10/18/99	106.65	43.60	63.05	
	12/08/99	106.65	43.62	63.03	
	01/27/00	106.65	43.86	62.79	
	02/28/00	106.65	43.86	62.79	
	03/15/00	106.65	43.62	63.03	
	04/13/00	106.65	43.92	62.73	
	05/18/00	106.65	43.50	63.15	
	06/20/00	106.65	43.48	63.17	
	07/13/00	106.65	43.29	63.36	
	08/17/00	106.65	43.38	63.27	
	09/07/00	106.65	44.30	62.35	
	10/26/00	106.65	44.74	61.91	
	11/21/00	106.65	44.52	62.13	
	12/05/00	106.65	44.51	62.14	
	01/04/01	106.65	44.55	62.10	
	02/22/01	106.65	43.91	62.74	
	03/08/01	106.65	43.25	63.40	
	04/24/01	106.65	44.64	62.01	
	06/05/01	106.65	44.50	62.15	
	01/14/02	106.65	44.90	61.75	
	07/02/02	106.65	45.70	60.95	
	12/27/02	106.65	46.86	59.79	

Table 1 (Cont'd).
Groundwater Elevations in Monitoring Wells
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft. msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-3	02/27/98	105.87	44.55	61.32	
	03/02/98	105.87	44.56	61.31	
	03/04/98	105.87	44.40	61.47	
	04/08/98	105.87	44.39	61.48	
	05/20/98	105.87	43.80	62.07	
	10/08/98	105.87	43.26	62.61	
	11/05/98	105.87	43.60	62.27	
	12/21/98	105.87	43.33	62.54	
	01/19/99	105.87	43.18	62.69	
	02/03/99	105.87	42.97	62.90	
	03/30/99	105.87	43.19	62.68	
	06/01/99	105.87	43.58	62.29	
	07/29/99	105.87	43.85	62.02	
	09/01/99	105.87	43.90	61.97	
	09/23/99	105.87	44.10	61.77	
	10/18/99	105.87	44.37	61.50	
	12/08/99	105.87	44.64	61.23	
	01/27/00	105.87	44.69	61.18	
	02/28/00	105.87	44.75	61.12	
	03/15/00	105.87	44.41	61.46	
	04/13/00	105.87	44.86	61.01	
	05/18/00	105.87	44.94	60.93	
	06/20/00	105.87	44.88	60.99	
	07/13/00	105.87	45.25	60.62	
	08/17/00	105.87	45.06	60.81	
	09/07/00	105.87	44.83	61.04	
	10/26/00	105.87	45.94	59.93	
	11/21/00	105.87	46.00	59.87	
	12/05/00	105.87	45.77	60.10	
	01/04/01	105.87	45.89	59.98	
	02/22/01	105.87	45.53	60.34	
	03/08/01	105.87	45.21	60.66	
	04/24/01	105.87	45.72	60.15	
	06/05/01	105.87	45.74	60.13	
	01/14/02	105.87	45.13	60.74	
	07/02/02	105.87	45.82	60.05	
	12/27/02	105.87	47.68	58.19	

Table 1 (Cont'd).
Groundwater Elevations in Monitoring Wells
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft. msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-4	11/03/98	104.72	42.77	61.93	
	11/05/98	104.72	42.64	62.08	
	12/21/98	104.72	42.93	61.79	
	01/19/99	104.72	42.80	61.92	
	02/03/99	104.72	42.63	62.09	
	03/30/99	104.72	42.89	61.83	
	06/01/99	104.72	43.28	61.44	
	07/29/99	104.72	43.63	61.09	
	09/01/99	104.72	43.70	61.02	
	09/23/99	104.72	43.96	60.76	
	10/18/99	104.72	44.22	60.5	
	12/08/99	104.72	44.48	60.24	
	01/27/00	104.72	44.70	60.02	
	02/28/00	104.72	NR		Truck Parked on well
	03/15/00	104.72	44.37	60.35	
	04/13/00	104.72	NR		Truck Parked on well
	05/18/00	104.72	44.81	59.91	
	06/20/00	104.72	44.94	59.78	
	07/13/00	104.72	45.10	59.62	
	08/17/00	104.72	45.36	59.36	
	09/07/00	104.72	45.31	59.41	
	10/26/00	104.72	45.89	58.83	
	11/21/00	104.72	45.86	58.86	
	12/05/00	104.72	45.71	59.01	
	01/04/01	104.72	45.79	58.93	
	02/22/01	104.72	45.49	59.23	
	03/08/01	104.72	45.62	59.10	
	04/24/01	104.72	45.68	59.04	
	06/05/01	104.72	45.80	58.92	
	01/14/01	104.72	46.23	58.49	
	07/02/02	104.72	46.94	57.78	
	12/27/02	104.72	48.03	56.69	

Table 1 (Cont'd).
Groundwater Elevations in Monitoring Wells
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Well ID	Date	Elevation of Top-of-Casing (ft. msl)	Depth to Water (ft bgs)	Elevation of Water Surface (ft msl)	Comments
MW-5	11/03/98	106.13	43.32	62.81	
	11/05/98	106.13	43.30	62.83	
	12/21/98	106.13	43.58	62.55	
	01/19/99	106.13	43.46	62.67	
	02/03/99	106.13	43.2	62.93	
	03/30/99	106.13	43.49	62.64	
	06/01/99	106.13	43.88	62.25	
	07/29/99	106.13	44.19	61.94	
	09/01/99	106.13	44.22	61.91	
	09/23/99	106.13	44.48	61.65	
	10/18/99	106.13	44.72	61.41	
	12/08/99	106.13	44.98	61.15	
	01/27/00	106.13	45.17	60.96	
	02/28/00	106.13	45.15	60.98	
	03/15/00	106.13	44.87	61.26	
	04/13/00	106.13	45.22	60.91	
	05/18/00	106.13	45.29	60.84	
	06/20/00	106.13	45.30	60.83	
	07/13/00	106.13	45.63	60.50	
	08/17/00	106.13	45.85	60.28	
	09/07/00	106.13	45.69	60.44	
	10/26/00	106.13	46.35	59.78	
	11/21/00	106.13	46.33	59.80	
	12/05/00	106.13	46.16	59.97	
	01/04/01	106.13	46.26	59.87	
	02/22/01	106.13	46.00	60.13	
	03/08/01	106.13	45.95	60.18	
	04/24/01	106.13	46.19	59.94	
	06/05/01	106.13	46.30	59.83	
	01/14/01	106.13	46.73	59.40	
	07/02/02	106.13	47.41	58.72	
	12/27/02	106.13	48.5	57.63	

NOTES

ft msl = feet above mean sea level

ft bgs = feet below ground surface

NR = Not Recorded

= Not Applicable

1. Monitoring well northing and easting coordinates and top-of-casing elevations for wells MW-1, MW-2, and MW-3 were surveyed on 6 March 1998 by Rattray & Associates, Inc.
2. Monitoring well northing and easting coordinates and top-of-casing elevations for wells MW-4 and MW-5 were surveyed on 21 December 1998 by Rattray & Associates, Inc.

Table 2.
Results of VOCs Detected in Groundwater Samples
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Well ID	Sample Number	Sample Date	Analyte Concentration ($\mu\text{g/L}$)								
			Benzene	Toluene	1,1-DCA	1,1-DCE	1,2-DCA	c-1,2-DCE	t-1,2-DCE	PCE	TCE
MW-1	MW-1	03/04/98	<100	<100	<100	220	<100	130	<100	140	24,000
	MW-1-DUP	03/04/98	<100	<100	<100	210	<100	150	<100	160	25,000
	MW-1	05/20/98	<125	<125	<125	160	<125	130	<125	<125	24,000
	MW-1	11/05/98	<125	<125	<125	140	<125	160	<125	170	28,000
	MW-1	02/03/99	<125	<125	<125	130	<125	160	<125	160	27,000
	MW-1	06/01/99	<100	<100	<100	140	<100	190	<100	160	28,000
	MW-1	09/01/99	<100	<100	140	220	<100	200	<100	190	32,000
	MW-1	12/08/99	<250	<250	<250	<250	<250	<250	<250	<250	30,000
	MW-1-A ⁽³⁾	12/08/99	<100	<100	110	150	<100	200	<100	160	33,000
	MW-1	03/15/00	<100	<100	<100	160	<100	230	<100	150	30,000
	MW-1	06/20/00	<100	<100	<100	<100	<100	<100	<100	<100	24,000
	MW-1	09/07/00	<100	<100	<100	<100	<100	<100	<100	<100	21,000
	MW-1	12/05/00	<100	<100	<100	<100	<100	<100	<100	<100	30,000
	MW-1	03/08/01	<100	<100	<100	<100	<100	<100	<100	<100	23,000
	MW-1	06/05/01	<125	<125	<125	<125	<125	<125	<125	150	31,000
	MW-1	01/17/02	<200	<200	49J	47J	<200	520J	<200	65J	15,000
	MW-1 (PDB-1A)	01/17/02	<200	<200	62J	120J	<200	150J	<200	61J	20,000
	MW-1 (PDB-1B)	01/17/02	<200	<200	64J	120J	<200	150J	<200	84J	19,000
	MW-1	07/02/02	<10	<20	48	71	<10	140	<20	72	15,000
	MW-1-69'	01/10/03	<250	<250	<250	<250	<250	<250	<250	<250	24,000
	MW-1-69'-D	01/10/03	<250	<250	<250	<250	<250	<250	<250	<250	24,000
MW-2	MW-2	03/04/98	<10	<10	13	34	<10	65	<10	<10	2,700
	MW-2	05/20/98	<10	<10	14	38	<10	68	<10	<10	3,000
	MW-2	11/05/98	<10	<10	13	36	<10	68	<10	<10	3,200
	MW-2	02/03/99	<10	<10	13	36	<10	70	<10	<10	3,200
	MW-2	06/01/99	<10	<10	12	34	<10	68	<10	<10	2,800
	MW-2	09/01/99	<10	<10	16	49	<10	72	<10	<10	3,100
	MW-2	12/08/99	<13	<13	<13	<13	<13	57	<13	<13	2,400
	MW-2-A ⁽³⁾	12/08/99	<10	<10	12	22	<10	63	<10	<10	2,600
	MW-2	03/15/00	<10	<10	<10	<10	<10	74	<10	<10	2,800
	MW-2	06/20/00	<10	<10	<10	<10	<10	46	<10	<10	2,000
	MW-2	09/07/00	<10	<10	<10	<10	<10	42	<10	<10	1,800
	MW-2	12/05/00	<10	<10	<10	<10	<10	50	<10	<10	2,300
	MW-2	03/08/01	<10	<10	<10	<10	<10	44	<10	<10	1,800
	MW-2-DUP	03/08/01	<10	<10	<10	<10	<10	42	<10	<10	1,600
	MW-2	06/05/01	<10	<10	<10	<10	<10	47	<10	<10	2,300
	MW-2	01/17/02	<50	<50	<50	25J	<50	59J	<50	<50	2,000
	MW-2 (PDB-2A)	01/17/02	<50	<50	<50	32J	<50	46J	<50	<50	1,900
	MW-2 (PDB-2B)	01/17/02	<50	<50	<50	38J	<50	52	<50	<50	2,300
	MW-2	07/02/02	<2.5	<5	<5	20	<2.5	50	<5	<5	1,700
	MW-2-53'	01/10/03	<10	<10	<10	20	<10	46	<10	<10	1,600

Table 2 (Cont'd)
Results of VOCs Detected in Groundwater Samples
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Well ID	Sample Number	Sample Date	Analyte Concentration (μL)									
			Benzene	Toluene	1,1-DCA	1,1-DCE	1,2-DCA	c-1,2-DCE	t-1,2-DCE	PCE	TCE	
MW-3	MW-3	03/04/98	<10	13	14	82	<10	200	<10	<10	2,800	
	MW-3	05/20/98	<10	<10	13	58	<10	230	15	<10	2,800	
	MW-3	11/05/98	<10	<10	11	66	<10	240	18	<10	2,300	
	MW-3	02/03/99	<10	<10	11	64	<10	220	18	<10	2,000	
	MW-3	06/01/99	<10	<10	11	66	<10	240	18	<10	1,900	
	MW-3	09/01/99	<10	<10	13	80	<10	270	20	<10	2,600	
	MW-3	12/08/99	<13	<13	<13	<13	<13	220	<13	<13	2,500	
	MW-3-A ⁽³⁾	12/08/99	<10	<10	13	55	<10	240	19	<10	2,900	
	MW-3	03/15/00	<10	<10	11	61	<10	300	20	<10	3,100	
	MW-3	06/20/00	<10	<10	10	<10	<10	170	14	<10	1,900	
	MW-3-DUP	06/20/00	<10	<10	11	<10	<10	200	16	<10	2,100	
	MW-3	09/07/00	<10	<10	<10	<10	<10	160	<10	<10	1,700	
	MW-3-DUP	09/07/00	<10	<10	<10	<10	<10	160	<10	<10	1,700	
	MW-3	12/05/00	<10	<10	<10	<10	<10	200	<10	<10	2,400	
	MW-3-DUP	12/05/00	<10	<10	<10	<10	<10	210	<10	<10	2,500	
	MW-3	03/08/01	<10	<10	<10	55	<10	200	<10	<10	1,700	
	MW-3	06/05/01	<10	<10	<10	<10	<10	210	<10	<10	2,300	
	MW-3	01/17/02	18J	<50	<50	40J	<50	130	14J	<50	1,200	
	MW-3 (PDB-3A)	01/17/02	<50	<50	<50	18J	<50	140	15J	<50	1,700	
	MW-3 (PDB-3A)	01/17/02	13J	<50	<50	54	<50	150	17J	<50	1,700	
	MW-3	07/02/02	19	40	7.6	38	2.7	170	12	<5	1,500	
	MW-3-69'	01/10/03	<10	<10	<10	31	<10	160	10	<10	1,200	
MW-4	MW-4	11/05/98	<0.5	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	6.7	
	MW-4	02/03/99	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5	
	MW-4	06/01/99	<0.5	<0.5	<0.5	<0.5	65	1.1	<0.5	<0.5	0.90	
	MW-4	09/01/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	MW-4	12/08/99	1.2	<0.5	<0.5	<0.5	<0.5	4.1	1.0	<0.5	17	
	MW-4-A ⁽³⁾	12/08/99	1.2	<0.5	<0.5	<0.5	<0.5	4.6	1.1	<0.5	18	
	MW-4	03/15/00	77	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.68	
	MW-4	06/20/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	MW-4	09/07/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	MW-4	12/05/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	MW-4	03/08/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	MW-4	06/05/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	MW-4	01/17/02	0.28J	<1	<1	1.4	<1	61	6.7	<1	220	
	MW-4 (PDB-4A)	01/17/02	<1	<1	<1	<1	<1	<1	<1	<1	0.30J	
	MW-4 (PDB-4B)	01/17/02	<1	<1	<1	<1	<1	<1	<1	<1	0.23J	
	MW-4	07/02/02	<0.5	<1	<1	<1	<1	<0.5	17	1.3	<1	
	MW-4 (DUP)	07/02/02	<0.5	<1	<1	<1	<1	<0.5	20	1.6	<1	
	MW-4-69'	01/10/03	0.64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

Table 2 (Cont'd)
Results of VOCs Detected in Groundwater Samples
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Well ID	Sample Number	Sample Date	Analyte Concentration ($\mu\text{g/L}$)								
			Benzene	Toluene	1,1-DCA	1,1-DCE	1,2-DCA	c-1,2-DCE	t-1,2-DCE	PCE	TCE
MW-5	MW-5	11/05/98	<25	<25	<25	42	<25	380	30	<25	5,000
	MW-5-DUP	11/05/98	<25	<25	<25	40	<25	360	29	<25	4,800
	MW-5	02/03/99	<25	<25	<25	49	<25	420	35	<25	5,100
	MW-5-DUP	02/03/99	<25	<25	<25	45	<25	370	31	<25	4,500
	MW-5	06/01/99	<25	<25	<25	52	35	420	36	<25	5,500
	MW-5-DUP	06/01/99	<25	<25	<25	56	39	430	35	<25	5,300
	MW-5	09/01/99	<25	<25	<25	40	<25	420	45	<25	5,500
	MW-5-DUP	09/01/99	<25	<25	<25	69	<25	440	45	<25	6,000
	MW-5	12/08/99	<50	<50	<50	<50	<50	390	<50	<50	5,100
	MW-5-A ⁽³⁾	12/08/99	<25	<25	<25	<25	<25	410	25	<25	5,300
	MW-5-DUP	12/08/99	<50	<50	<50	<50	<50	360	<50	<50	5,000
	MW-5-DUP-A ⁽³⁾	12/08/99	<25	<25	<25	<25	<25	410	26	<25	5,300
	MW-5	03/15/00	<50	<50	<50	<50	<50	440	<50	<50	5,500
	MW-5-DUP	03/15/00	<50	<50	<50	<50	<50	450	<50	<50	5,800
	MW-5	06/20/00	<25	<25	<25	<25	<25	350	<25	<25	4,400
	MW-5	09/07/00	<10	<10	<10	<10	<10	280	<10	<10	3,700
	MW-5	12/05/00	<10	<10	<10	<10	<10	190	<10	<10	4,700
	MW-5	03/08/01	<25	140	<25	<25	<25	260	<25	<25	3,600
	MW-5	06/05/01	<25	<25	<25	<25	<25	340	<25	<25	5,400
	MW-5-DUP	06/05/01	<25	<25	<25	<25	<25	350	<25	<25	5,400
	MW-5	01/17/02	<50	<50	<50	13J	<50	120	13J	<50	1,900
	MW-5 (PDB-5A)	01/17/02	<50	<50	<50	22J	<50	140	18J	<50	3,200
	MW-5 (PDB-5B)	01/17/02	<50	<50	<50	37J	<50	270	29J	<50	4,000
	MW-5	07/02/02	<2.5	7.8	<5	8.9	<2.5	58	8.6	<5	1,700
	MW-5-53'	01/10/03	<50	<50	<50	<50	<50	320	<50	<50	4,700
CA MCL			1.0	150	5.0	6.0	0.5	6.0	10	5.0	5.0

Notes: 1,1-DCA = 1,1-dichloroethane

1,1-DCE = 1,1-dichloroethene

1,2-DCA = 1,2-dichloroethane

c-1,2-DCE = cis-1,2-dichloroethene

t-1,2-DCE = trans-1,2-dichloroethene

PCE = terachloroethene

TCE = trichloroethene

VOCs = volatile organic compounds

$\mu\text{g/L}$ = micrograms per liter

J = value between Reporting Limit and Method Detection Limit

B = found in associated method blank

1. Current analyses performed by EMAX Laboratories, Inc., in Torrance, California using EPA Method 8260 for VOCs.

2. < indicates that the analyte was not detected at a concentration above the indicated method detection limit.

3. Samples collected on 8 December 1999 were initially analyzed on 9 December 1999 and were re-analyzed on 17 December 1999 in an attempt to achieve lower method detection limits.

4. CA MCL = California Maximum Containment Level

5. PDB-1A = bottom of well casing (about 68-69 feet)

PDB-1B = middle of well casing (about 52-54 feet)

APPENDIX A

LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY FORMS

January 17, 2003

Mike Crews
Brown & Caldwell Consulting
16735 Von Karman Suite 200
Irvine, CA. 92714-4918

Re: Webb of California/#22946.100

Dear Mike:

Enclosed are the results of the samples submitted to our laboratory on January 10, 2003. For your reference, these analyses have been assigned our service request number L2300075.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A, expiration: August 31, 2004). NELAP (certificate number: 02115CA, expiration: December 31, 2003). Los Angeles County Laboratory ID (No. 10151).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.



Stuart Sigman
Project Chemist

SS

Columbia Analytical Services, Inc.

Acronyms

8015M	California DHS LUFT Method
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene/Toluene/Ethylbenzene/Xylenes
CAM	California Assessment Metals
CAS Number	Chemical Abstract Service Registry Number
CFC	Chlorofluorocarbon
COD	Chemical Oxygen Demand
CRDL	Contract Required Detection Limit
D	Detected; result must be greater than zero.
DL	Detected; result must be greater than the detection limit.
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOH or DHS	Department of Health Services
ELAP	Environmental Laboratory Accreditation Program
EPA	U.S. Environmental Protection Agency
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MDL	Method Detection Limit
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl- <i>tert</i> -Butyl Ether
NA	Not Applicable
NC	Not Calculated
ND	None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	<i>Standard Methods for the Examination of Water and Wastewater</i> , 18th Ed., 1992.
STLC	Solubility Threshold Limit Concentration
SW	<i>Test Methods for Evaluating Solid Waste, Physical/Chemical Methods</i> SW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristics Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

Qualifiers

U	Undetected at or above MDL/MRL.
J	Estimated concentration. Analyte detected above MDL but below MRL.
B	Hit above MRL also found in Method Blank.
E	Analyte concentration above high point of ICAL.
N	Presumptive evidence of compound.
D	Result from dilution.
X	See case narrative.

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request No.: L2300075
Date Received: 1/10/03

CASE NARRATIVE

All analyses were performed in accordance with our laboratory's quality assurance program. This report contains analytical results for sample(s) designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS).

All EPA recommended holding times have been met for analyses in this sample delivery group.

The following difficulties were experienced during analysis of this batch:

Volatile Organic Compounds, Method 8260B:

All samples with the exception of MW-4-69' required dilution due to high levels of target analytes. The reporting limits have been elevated accordingly.

Approved by: _____ SS Date: 1/17/03

000023

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100

Service Request: L2300075

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
MW-2-53'	L2300075-002	01/10/2003	01/10/2003
MW-3-69'	L2300075-003	01/10/2003	01/10/2003
MW-1-69'	L2300075-004	01/10/2003	01/10/2003
MW-1-69'-D	L2300075-005	01/10/2003	01/10/2003
MW-4-69'	L2300075-006	01/10/2003	01/10/2003
MW-5-53'	L2300075-007	01/10/2003	01/10/2003

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Stuart Sigm

Name: Stuart Sigm

Date: 1/17/03

Title: Project Chemist

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name:	MW-2-53'	Units:	ug/L
Lab Code:	L2300075-002	Basis:	NA
Extraction Method:	EPA 5030B	Level:	Low
Analysis Method:	8260B		

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Chloromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Vinyl Chloride	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromomethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Chloroethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Trichlorofluoromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Acetone	ND U	200	20	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethene	20 D	10	20	01/15/03	01/15/03	LWG0300162	
Carbon Disulfide	ND U	40	20	01/15/03	01/15/03	LWG0300162	
Methylene Chloride	ND U	40	20	01/15/03	01/15/03	LWG0300162	
trans-1,2-Dichloroethene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
2-Butanone (MEK)	ND U	200	20	01/15/03	01/15/03	LWG0300162	
2,2-Dichloropropane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
cis-1,2-Dichloroethene	46 D	10	20	01/15/03	01/15/03	LWG0300162	
Chloroform	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromochloromethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,1,1-Trichloroethane (TCA)	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,1-Dichloropropene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Carbon Tetrachloride	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,2-Dichloroethane (EDC)	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Benzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Trichloroethene (TCE)	1600 D	10	20	01/15/03	01/15/03	LWG0300162	
1,2-Dichloropropane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromodichloromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Dibromomethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
2-Hexanone	ND U	200	20	01/15/03	01/15/03	LWG0300162	
cis-1,3-Dichloropropene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Toluene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
trans-1,3-Dichloropropene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichloroethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
4-Methyl-2-pentanone (MIBK)	ND U	200	20	01/15/03	01/15/03	LWG0300162	
1,3-Dichloropropane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Tetrachloroethene (PCE)	ND U	10	20	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-2-53'
Lab Code: L2300075-002
Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,2-Dibromoethane (EDB)	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Chlorobenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,1,1,2-Tetrachloroethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Ethylbenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Total Xylenes	ND U	30	20	01/15/03	01/15/03	LWG0300162	
Styrene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromoform	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Isopropylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,1,2,2-Tetrachloroethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichloropropane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromobenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
n-Propylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
2-Chlorotoluene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
4-Chlorotoluene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,3,5-Trimethylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
tert-Butylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,2,4-Trimethylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
sec-Butylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,3-Dichlorobenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
4-Isopropyltoluene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,4-Dichlorobenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
n-Butylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,2-Dichlorobenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,2-Dibromo-3-chloropropane	ND U	40	20	01/15/03	01/15/03	LWG0300162	
1,2,4-Trichlorobenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichlorobenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Naphthalene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Hexachlorobutadiene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Methyl tert-Butyl Ether	ND U	40	20	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichlorotrifluoroethane	ND U	40	20	01/15/03	01/15/03	LWG0300162	
Vinyl Acetate	ND U	200	20	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-2-53'
Lab Code: L2300075-002 **Units:** ug/L
 Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	78-126	01/15/03	Acceptable
Toluene-d8	101	83-118	01/15/03	Acceptable
4-Bromofluorobenzene	97	73-115	01/15/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-3-69' **Units:** ug/L
Lab Code: L2300075-003 **Basis:** NA
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260B

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Chloromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Vinyl Chloride	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromomethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Chloroethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Trichlorofluoromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Acetone	ND U	200	20	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethene	31 D	10	20	01/15/03	01/15/03	LWG0300162	
Carbon Disulfide	ND U	40	20	01/15/03	01/15/03	LWG0300162	
Methylene Chloride	ND U	40	20	01/15/03	01/15/03	LWG0300162	
trans-1,2-Dichloroethene	10 D	10	20	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
2-Butanone (MEK)	ND U	200	20	01/15/03	01/15/03	LWG0300162	
2,2-Dichloropropane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
cis-1,2-Dichloroethene	160 D	10	20	01/15/03	01/15/03	LWG0300162	
Chloroform	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromochloromethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,1,1-Trichloroethane (TCA)	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,1-Dichloropropene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Carbon Tetrachloride	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,2-Dichloroethane (EDC)	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Benzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Trichloroethene (TCE)	1200 D	10	20	01/15/03	01/15/03	LWG0300162	
1,2-Dichloropropane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromodichloromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Dibromomethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
2-Hexanone	ND U	200	20	01/15/03	01/15/03	LWG0300162	
cis-1,3-Dichloropropene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Toluene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
trans-1,3-Dichloropropene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichloroethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
4-Methyl-2-pentanone (MIBK)	ND U	200	20	01/15/03	01/15/03	LWG0300162	
1,3-Dichloropropane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Tetrachloroethene (PCE)	ND U	10	20	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-3-69' **Units:** ug/L
Lab Code: L2300075-003 **Basis:** NA
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260B

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,2-Dibromoethane (EDB)	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Chlorobenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,1,1,2-Tetrachloroethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Ethylbenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Total Xylenes	ND U	30	20	01/15/03	01/15/03	LWG0300162	
Styrene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromoform	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Isopropylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,1,2,2-Tetrachloroethane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichloropropane	ND U	10	20	01/15/03	01/15/03	LWG0300162	
Bromobenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
n-Propylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
2-Chlorotoluene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
4-Chlorotoluene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,3,5-Trimethylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
tert-Butylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,2,4-Trimethylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
sec-Butylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,3-Dichlorobenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
4-Isopropyltoluene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,4-Dichlorobenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
n-Butylbenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,2-Dichlorobenzene	ND U	10	20	01/15/03	01/15/03	LWG0300162	
1,2-Dibromo-3-chloropropane	ND U	40	20	01/15/03	01/15/03	LWG0300162	
1,2,4-Trichlorobenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichlorobenzene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Naphthalene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Hexachlorobutadiene	ND U	20	20	01/15/03	01/15/03	LWG0300162	
Methyl tert-Butyl Ether	ND U	40	20	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichlorotrifluoroethane	ND U	40	20	01/15/03	01/15/03	LWG0300162	
Vinyl Acetate	ND U	200	20	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-3-69' **Units:** ug/L
Lab Code: L2300075-003 **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	78-126	01/15/03	Acceptable
Toluene-d8	100	83-118	01/15/03	Acceptable
4-Bromofluorobenzene	96	73-115	01/15/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name:	MW-1-69'	Units:	ug/L
Lab Code:	L2300075-004	Basis:	NA
Extraction Method:	EPA 5030B	Level:	Low
Analysis Method:	8260B		

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Chloromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Vinyl Chloride	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromomethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Chloroethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Trichlorofluoromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Acetone	ND U	5000	500	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Carbon Disulfide	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
Methylene Chloride	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
trans-1,2-Dichloroethene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
2-Butanone (MEK)	ND U	5000	500	01/15/03	01/15/03	LWG0300162	
2,2-Dichloropropane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
cis-1,2-Dichloroethene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Chloroform	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromochloromethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1,1-Trichloroethane (TCA)	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1-Dichloropropene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Carbon Tetrachloride	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,2-Dichloroethane (EDC)	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Benzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Trichloroethene (TCE)	24000 D	250	500	01/15/03	01/15/03	LWG0300162	
1,2-Dichloropropane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromodichloromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Dibromomethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
2-Hexanone	ND U	5000	500	01/15/03	01/15/03	LWG0300162	
cis-1,3-Dichloropropene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Toluene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
trans-1,3-Dichloropropene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichloroethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
4-Methyl-2-pentanone (MIBK)	ND U	5000	500	01/15/03	01/15/03	LWG0300162	
1,3-Dichloropropane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Tetrachloroethene (PCE)	ND U	250	500	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-1-69' **Units:** ug/L
Lab Code: L2300075-004 **Basis:** NA
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260B

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,2-Dibromoethane (EDB)	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Chlorobenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1,1,2-Tetrachloroethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Ethylbenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Total Xylenes	ND U	750	500	01/15/03	01/15/03	LWG0300162	
Styrene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromoform	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Isopropylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,1,2,2-Tetrachloroethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichloropropane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromobenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
n-Propylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
2-Chlorotoluene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
4-Chlorotoluene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,3,5-Trimethylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
tert-Butylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,2,4-Trimethylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
sec-Butylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,3-Dichlorobenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
4-Isopropyltoluene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,4-Dichlorobenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
n-Butylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,2-Dichlorobenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,2-Dibromo-3-chloropropane	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
1,2,4-Trichlorobenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichlorobenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Naphthalene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Hexachlorobutadiene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Methyl tert-Butyl Ether	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichlorotrifluoroethane	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
Vinyl Acetate	ND U	5000	500	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-1-69' **Units:** ug/L
Lab Code: L2300075-004 **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	78-126	01/15/03	Acceptable
Toluene-d8	101	83-118	01/15/03	Acceptable
4-Bromofluorobenzene	96	73-115	01/15/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-1-69-D
Lab Code: L2300075-005
Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Chloromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Vinyl Chloride	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromomethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Chloroethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Trichlorofluoromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Acetone	ND U	5000	500	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Carbon Disulfide	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
Methylene Chloride	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
trans-1,2-Dichloroethene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
2-Butanone (MEK)	ND U	5000	500	01/15/03	01/15/03	LWG0300162	
2,2-Dichloropropane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
cis-1,2-Dichloroethene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Chloroform	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromochloromethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1,1-Trichloroethane (TCA)	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1-Dichloropropene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Carbon Tetrachloride	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,2-Dichloroethane (EDC)	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Benzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Trichloroethene (TCE)	24000 D	250	500	01/15/03	01/15/03	LWG0300162	
1,2-Dichloropropane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromodichloromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Dibromomethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
2-Hexanone	ND U	5000	500	01/15/03	01/15/03	LWG0300162	
cis-1,3-Dichloropropene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Toluene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
trans-1,3-Dichloropropene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichloroethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
4-Methyl-2-pentanone (MIBK)	ND U	5000	500	01/15/03	01/15/03	LWG0300162	
1,3-Dichloropropane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Tetrachloroethene (PCE)	ND U	250	500	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-1-69'-D
Lab Code: L2300075-005
Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,2-Dibromoethane (EDB)	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Chlorobenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,1,1,2-Tetrachloroethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Ethylbenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Total Xylenes	ND U	750	500	01/15/03	01/15/03	LWG0300162	
Styrene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromoform	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Isopropylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,1,2,2-Tetrachloroethane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichloropropane	ND U	250	500	01/15/03	01/15/03	LWG0300162	
Bromobenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
n-Propylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
2-Chlorotoluene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
4-Chlorotoluene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,3,5-Trimethylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
tert-Butylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,2,4-Trimethylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
sec-Butylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,3-Dichlorobenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
4-Isopropyltoluene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,4-Dichlorobenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
n-Butylbenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,2-Dichlorobenzene	ND U	250	500	01/15/03	01/15/03	LWG0300162	
1,2-Dibromo-3-chloropropane	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
1,2,4-Trichlorobenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichlorobenzene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Naphthalene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Hexachlorobutadiene	ND U	500	500	01/15/03	01/15/03	LWG0300162	
Methyl tert-Butyl Ether	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichlorotrifluoroethane	ND U	1000	500	01/15/03	01/15/03	LWG0300162	
Vinyl Acetate	ND U	5000	500	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-1-69'-D
Lab Code: L2300075-005

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	78-126	01/15/03	Acceptable
Toluene-d8	101	83-118	01/15/03	Acceptable
4-Bromofluorobenzene	97	73-115	01/15/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name:	MW-4-69'	Units:	ug/L
Lab Code:	L2300075-006	Basis:	NA
Extraction Method:	EPA 5030B	Level:	Low
Analysis Method:	8260B		

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Chloromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Vinyl Chloride	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromomethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Chloroethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Trichlorofluoromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Acetone	ND U	10	1	01/16/03	01/16/03	LWG0300180	
1,1-Dichloroethene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Carbon Disulfide	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
Methylene Chloride	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
trans-1,2-Dichloroethene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1-Dichloroethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
2-Butanone (MEK)	ND U	10	1	01/16/03	01/16/03	LWG0300180	
2,2-Dichloropropane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
cis-1,2-Dichloroethene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Chloroform	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromochloromethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1-Dichloropropene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Carbon Tetrachloride	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,2-Dichloroethane (EDC)	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Benzene	0.64	0.50	1	01/16/03	01/16/03	LWG0300180	
Trichloroethene (TCE)	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,2-Dichloropropane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromodichloromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Dibromomethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
2-Hexanone	ND U	10	1	01/16/03	01/16/03	LWG0300180	
cis-1,3-Dichloropropene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Toluene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
trans-1,3-Dichloropropene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1,2-Trichloroethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
4-Methyl-2-pentanone (MIBK)	ND U	10	1	01/16/03	01/16/03	LWG0300180	
1,3-Dichloropropane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Tetrachloroethene (PCE)	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name:	MW-4-69'	Units:	ug/L
Lab Code:	L2300075-006	Basis:	NA
Extraction Method:	EPA 5030B	Level:	Low
Analysis Method:	8260B		

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,2-Dibromoethane (EDB)	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Chlorobenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Ethylbenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Total Xylenes	ND U	1.5	1	01/16/03	01/16/03	LWG0300180	
Styrene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromoform	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Isopropylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,2,3-Trichloropropane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromobenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
n-Propylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
2-Chlorotoluene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
4-Chlorotoluene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,3,5-Trimethylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
tert-Butylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,2,4-Trimethylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
sec-Butylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,3-Dichlorobenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
4-Isopropyltoluene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,4-Dichlorobenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
n-Butylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,2-Dichlorobenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
1,2,4-Trichlorobenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,2,3-Trichlorobenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Naphthalene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Hexachlorobutadiene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Methyl tert-Butyl Ether	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
Vinyl Acetate	ND U	10	1	01/16/03	01/16/03	LWG0300180	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-4-69' **Units:** ug/L
Lab Code: L2300075-006 **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	78-126	01/16/03	Acceptable
Toluene-d8	101	83-118	01/16/03	Acceptable
4-Bromofluorobenzene	96	73-115	01/16/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-5-53' **Units:** ug/L
Lab Code: L2300075-007 **Basis:** NA
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260B

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Chloromethane	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Vinyl Chloride	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Bromomethane	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Chloroethane	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Trichlorofluoromethane	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Acetone	ND U	1000	100	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Carbon Disulfide	ND U	200	100	01/15/03	01/15/03	LWG0300162	
Methylene Chloride	ND U	200	100	01/15/03	01/15/03	LWG0300162	
trans-1,2-Dichloroethene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
2-Butanone (MEK)	ND U	1000	100	01/15/03	01/15/03	LWG0300162	
2,2-Dichloropropane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
cis-1,2-Dichloroethene	320 D	50	100	01/15/03	01/15/03	LWG0300162	
Chloroform	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Bromochloromethane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
1,1,1-Trichloroethane (TCA)	ND U	50	100	01/15/03	01/15/03	LWG0300162	
1,1-Dichloropropene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Carbon Tetrachloride	ND U	50	100	01/15/03	01/15/03	LWG0300162	
1,2-Dichloroethane (EDC)	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Benzene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Trichloroethene (TCE)	4700 D	50	100	01/15/03	01/15/03	LWG0300162	
1,2-Dichloropropane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Bromodichloromethane	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Dibromomethane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
2-Hexanone	ND U	1000	100	01/15/03	01/15/03	LWG0300162	
cis-1,3-Dichloropropene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Toluene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
trans-1,3-Dichloropropene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichloroethane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
4-Methyl-2-pentanone (MIBK)	ND U	1000	100	01/15/03	01/15/03	LWG0300162	
1,3-Dichloropropane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Tetrachloroethene (PCE)	ND U	50	100	01/15/03	01/15/03	LWG0300162	

Comments: _____

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-5-53' **Units:** ug/L
Lab Code: L2300075-007 **Basis:** NA
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260B

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND U	100	100	01/15/03	01/15/03	LWG0300162	
1,2-Dibromoethane (EDB)	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Chlorobenzene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
1,1,1,2-Tetrachloroethane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Ethylbenzene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Total Xylenes	ND U	150	100	01/15/03	01/15/03	LWG0300162	
Styrene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Bromoform	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Isopropylbenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
1,1,2,2-Tetrachloroethane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichloropropane	ND U	50	100	01/15/03	01/15/03	LWG0300162	
Bromobenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
n-Propylbenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
2-Chlorotoluene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
4-Chlorotoluene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
1,3,5-Trimethylbenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
tert-Butylbenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
1,2,4-Trimethylbenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
sec-Butylbenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
1,3-Dichlorobenzene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
4-Isopropyltoluene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
1,4-Dichlorobenzene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
n-Butylbenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
1,2-Dichlorobenzene	ND U	50	100	01/15/03	01/15/03	LWG0300162	
1,2-Dibromo-3-chloropropane	ND U	200	100	01/15/03	01/15/03	LWG0300162	
1,2,4-Trichlorobenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichlorobenzene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Naphthalene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Hexachlorobutadiene	ND U	100	100	01/15/03	01/15/03	LWG0300162	
Methyl tert-Butyl Ether	ND U	200	100	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichlorotrifluoroethane	ND U	200	100	01/15/03	01/15/03	LWG0300162	
Vinyl Acetate	ND U	1000	100	01/15/03	01/15/03	LWG0300162	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: 01/10/2003
Date Received: 01/10/2003

Volatile Organic Compounds

Sample Name: MW-5-53'
Lab Code: L2300075-007 **Units:** ug/L
 Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	78-126	01/15/03	Acceptable
Toluene-d8	101	83-118	01/15/03	Acceptable
4-Bromofluorobenzene	96	73-115	01/15/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Liquid

Service Request: L2300075
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank **Units:** ug/L
Lab Code: LWG0300162-4 **Basis:** NA
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260B

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Chloromethane	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Vinyl Chloride	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Bromomethane	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Chloroethane	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Trichlorofluoromethane	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Acetone	ND U	10	1	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Carbon Disulfide	ND U	2.0	1	01/15/03	01/15/03	LWG0300162	
Methylene Chloride	ND U	2.0	1	01/15/03	01/15/03	LWG0300162	
trans-1,2-Dichloroethene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
1,1-Dichloroethane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
2-Butanone (MEK)	ND U	10	1	01/15/03	01/15/03	LWG0300162	
2,2-Dichloropropane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
cis-1,2-Dichloroethene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Chloroform	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Bromochloromethane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
1,1-Dichloropropene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Carbon Tetrachloride	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
1,2-Dichloroethane (EDC)	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Benzene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Trichloroethene (TCE)	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
1,2-Dichloropropane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Bromodichloromethane	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Dibromomethane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
2-Hexanone	ND U	10	1	01/15/03	01/15/03	LWG0300162	
cis-1,3-Dichloropropene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Toluene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
trans-1,3-Dichloropropene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichloroethane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
4-Methyl-2-pentanone (MIBK)	ND U	10	1	01/15/03	01/15/03	LWG0300162	
1,3-Dichloropropane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Tetrachloroethene (PCE)	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Liquid

Service Request: L2300075
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank **Units:** ug/L
Lab Code: LWG0300162-4 **Basis:** NA
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260B

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
1,2-Dibromoethane (EDB)	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Chlorobenzene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Ethylbenzene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Total Xylenes	ND U	1.5	1	01/15/03	01/15/03	LWG0300162	
Styrene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Bromoform	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Isopropylbenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichloropropane	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
Bromobenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
n-Propylbenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
2-Chlorotoluene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
4-Chlorotoluene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
1,3,5-Trimethylbenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
tert-Butylbenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
1,2,4-Trimethylbenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
sec-Butylbenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
1,3-Dichlorobenzene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
4-Isopropyltoluene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
1,4-Dichlorobenzene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
n-Butylbenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
1,2-Dichlorobenzene	ND U	0.50	1	01/15/03	01/15/03	LWG0300162	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	01/15/03	01/15/03	LWG0300162	
1,2,4-Trichlorobenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
1,2,3-Trichlorobenzene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Naphthalene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Hexachlorobutadiene	ND U	1.0	1	01/15/03	01/15/03	LWG0300162	
Methyl tert-Butyl Ether	ND U	2.0	1	01/15/03	01/15/03	LWG0300162	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1	01/15/03	01/15/03	LWG0300162	
Vinyl Acetate	ND U	10	1	01/15/03	01/15/03	LWG0300162	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Liquid

Service Request: L2300075
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank **Units:** ug/L
Lab Code: LWG0300162-4 **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	78-126	01/15/03	Acceptable
Toluene-d8	101	83-118	01/15/03	Acceptable
4-Bromofluorobenzene	97	73-115	01/15/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name:	Method Blank	Units:	ug/L
Lab Code:	LWG0300180-4	Basis:	NA
Extraction Method:	EPA 5030B	Level:	Low
Analysis Method:	8260B		

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Chloromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Vinyl Chloride	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromomethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Chloroethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Trichlorofluoromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Acetone	ND U	10	1	01/16/03	01/16/03	LWG0300180	
1,1-Dichloroethene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Carbon Disulfide	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
Methylene Chloride	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
trans-1,2-Dichloroethene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1-Dichloroethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
2-Butanone (MEK)	ND U	10	1	01/16/03	01/16/03	LWG0300180	
2,2-Dichloropropane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
cis-1,2-Dichloroethene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Chloroform	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromochloromethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1,1-Trichloroethane (TCA)	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1-Dichloropropene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Carbon Tetrachloride	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,2-Dichloroethane (EDC)	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Benzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Trichloroethene (TCE)	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,2-Dichloropropane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromodichloromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Dibromomethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
2-Hexanone	ND U	10	1	01/16/03	01/16/03	LWG0300180	
cis-1,3-Dichloropropene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Toluene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
trans-1,3-Dichloropropene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1,2-Trichloroethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
4-Methyl-2-pentanone (MIBK)	ND U	10	1	01/16/03	01/16/03	LWG0300180	
1,3-Dichloropropane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Tetrachloroethene (PCE)	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name:	Method Blank	Units:	ug/L
Lab Code:	LWG0300180-4	Basis:	NA
Extraction Method:	EPA 5030B	Level:	Low
Analysis Method:	8260B		

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,2-Dibromoethane (EDB)	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Chlorobenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,1,1,2-Tetrachloroethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Ethylbenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Total Xylenes	ND U	1.5	1	01/16/03	01/16/03	LWG0300180	
Styrene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromoform	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Isopropylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,1,2,2-Tetrachloroethane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,2,3-Trichloropropane	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
Bromobenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
n-Propylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
2-Chlorotoluene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
4-Chlorotoluene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,3,5-Trimethylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
tert-Butylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,2,4-Trimethylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
sec-Butylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,3-Dichlorobenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
4-Isopropyltoluene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,4-Dichlorobenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
n-Butylbenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,2-Dichlorobenzene	ND U	0.50	1	01/16/03	01/16/03	LWG0300180	
1,2-Dibromo-3-chloropropane	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
1,2,4-Trichlorobenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
1,2,3-Trichlorobenzene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Naphthalene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Hexachlorobutadiene	ND U	1.0	1	01/16/03	01/16/03	LWG0300180	
Methyl tert-Butyl Ether	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1	01/16/03	01/16/03	LWG0300180	
Vinyl Acetate	ND U	10	1	01/16/03	01/16/03	LWG0300180	

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank **Lab Code:** LWG0300180-4 **Units:** ug/L **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	78-126	01/16/03	Acceptable
Toluene-d8	98	83-118	01/16/03	Acceptable
4-Bromofluorobenzene	95	73-115	01/16/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075

**Surrogate Recovery Summary
Volatile Organic Compounds**

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MW-2-53'	L2300075-002	96	101	97
MW-3-69'	L2300075-003	97	100	96
MW-1-69'	L2300075-004	97	101	96
MW-1-69'-D	L2300075-005	98	101	97
MW-4-69'	L2300075-006	94	101	96
MW-5-53'	L2300075-007	98	101	96
Method Blank	LWG0300162-4	98	101	97
Method Blank	LWG0300180-4	96	98	95
Batch QC	L2300074-001	98	101	98
Batch QC	L2300085-001	97	101	97
Batch QCMS	LWG0300162-1	96	102	101
Batch QCDMS	LWG0300162-2	96	103	102
Batch QCMS	LWG0300180-1	98	101	104
Batch QCDMS	LWG0300180-2	99	103	102
Lab Control Sample	LWG0300162-3	98	102	101
Lab Control Sample	LWG0300180-3	97	102	103

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane	78-126
Sur2 = Toluene-d8	83-118
Sur3 = 4-Bromofluorobenzene	73-115

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Extracted: 01/15/2003
Date Analyzed: 01/15/2003

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	L2300074-001	Basis:	NA
Extraction Method:	EPA 5030B	Level:	Low
Analysis Method:	8260B	Extraction Lot:	LWG0300162

Analyte Name	Sample Result	Batch QCMS LWG0300162-1			Batch QCDMS LWG0300162-2			%Rec Limits	RPD	RPD Limit			
		Matrix Spike			Duplicate Matrix Spike								
		Result	Expected	%Rec	Result	Expected	%Rec						
Vinyl Chloride	ND	10.6	10.0	106	10.6	10.0	106	75-143	1	25			
1,1-Dichloroethene	ND	8.92	10.0	89	8.57	10.0	86	69-126	4	25			
1,1-Dichloroethane	ND	11.5	10.0	115	11.2	10.0	112	89-136	3	25			
Chloroform	ND	10.9	10.0	109	10.6	10.0	106	86-129	2	25			
1,1,1-Trichloroethane (TCA)	ND	10.6	10.0	106	10.3	10.0	103	76-135	3	25			
1,2-Dichloroethane (EDC)	0.60	11.4	10.0	108	11.2	10.0	106	78-135	2	25			
Benzene	ND	10.5	10.0	105	10.3	10.0	103	78-120	2	25			
Trichloroethene (TCE)	ND	10.5	10.0	105	10.2	10.0	102	77-119	3	25			
1,2-Dichloropropane	ND	11.0	10.0	110	10.7	10.0	107	85-117	3	25			
Toluene	ND	10.6	10.0	106	10.5	10.0	105	83-119	1	25			
Tetrachloroethylene (PCE)	ND	10.4	10.0	104	10.2	10.0	102	68-136	2	25			
Chlorobenzene	ND	10.2	10.0	102	9.96	10.0	100	84-116	2	25			
Ethylbenzene	ND	10.4	10.0	104	10.2	10.0	102	84-121	2	25			
1,3,5-Trimethylbenzene	ND	9.34	10.0	93	9.39	10.0	94	71-122	1	25			
1,3-Dichlorobenzene	ND	9.67	10.0	97	9.53	10.0	95	85-108	1	25			
Methyl tert-Butyl Ether	ND	20.2	20.0	101	20.3	20.0	101	67-123	0	25			

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Extracted: 01/16/2003
Date Analyzed: 01/16/2003

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	Units:	ug/L
Lab Code:	L2300085-001	Basis:	NA
Extraction Method:	EPA 5030B	Level:	Low
Analysis Method:	8260B	Extraction Lot:	LWG0300180

Analyte Name	Sample Result	Batch QCMS LWG0300180-1			Batch QCDMS LWG0300180-2			%Rec Limits	RPD	RPD Limit			
		Matrix Spike			Duplicate Matrix Spike								
		Result	Expected	%Rec	Result	Expected	%Rec						
Vinyl Chloride	ND	10.6	10.0	106	10.6	10.0	106	75-143	0	25			
1,1-Dichloroethene	ND	8.88	10.0	89	8.45	10.0	85	69-126	5	25			
1,1-Dichloroethane	ND	11.3	10.0	113	10.8	10.0	108	89-136	4	25			
Chloroform	ND	10.6	10.0	106	10.3	10.0	103	86-129	3	25			
1,1,1-Trichloroethane (TCA)	ND	10.2	10.0	102	9.79	10.0	98	76-135	4	25			
1,2-Dichloroethane (EDC)	ND	10.8	10.0	108	10.6	10.0	106	78-135	2	25			
Benzene	ND	10.3	10.0	103	9.83	10.0	98	78-120	4	25			
Trichloroethylene (TCE)	ND	9.90	10.0	99	9.58	10.0	96	77-119	3	25			
1,2-Dichloropropane	ND	10.6	10.0	106	10.4	10.0	104	85-117	2	25			
Toluene	ND	10.3	10.0	103	9.90	10.0	99	83-119	4	25			
Tetrachloroethylene (PCE)	ND	9.67	10.0	97	9.37	10.0	94	68-136	3	25			
Chlorobenzene	ND	9.96	10.0	100	9.43	10.0	94	84-116	5	25			
Ethylbenzene	ND	10.1	10.0	101	9.64	10.0	96	84-121	5	25			
1,3,5-Trimethylbenzene	ND	9.81	10.0	98	9.45	10.0	95	71-122	4	25			
1,3-Dichlorobenzene	ND	9.36	10.0	94	9.09	10.0	91	85-108	3	25			
Methyl tert-Butyl Ether	ND	19.7	20.0	99	19.8	20.0	99	67-123	0	25			

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Liquid

Service Request: L2300075
Date Extracted: 01/15/2003
Date Analyzed: 01/15/2003

**Lab Control Spike Summary
Volatile Organic Compounds**

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L

Basis: NA

Level: Low

Extraction Lot: LWG0300162

Lab Control Sample

LWG0300162-3

Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Dichlorodifluoromethane	11.3	10.0	113	68-164
Chloromethane	11.4	10.0	114	71-140
Vinyl Chloride	9.95	10.0	100	75-126
Bromomethane	9.24	10.0	92	54-151
Chloroethane	9.27	10.0	93	78-129
Trichlorofluoromethane	9.43	10.0	94	64-143
Acetone	20.5	20.0	102	62-152
1,1-Dichloroethene	8.45	10.0	85	70-119
Carbon Disulfide	19.1	20.0	95	73-127
Methylene Chloride	9.48	10.0	95	65-127
trans-1,2-Dichloroethene	9.76	10.0	98	81-123
1,1-Dichloroethane	10.8	10.0	108	85-128
2-Butanone (MEK)	21.8	20.0	109	65-126
2,2-Dichloropropane	10.8	10.0	108	75-140
cis-1,2-Dichloroethene	10.3	10.0	103	82-121
Chloroform	10.5	10.0	105	82-123
Bromochloromethane	10.2	10.0	102	77-129
1,1,1-Trichloroethane (TCA)	9.89	10.0	99	72-127
1,1-Dichloropropene	10.4	10.0	104	77-123
Carbon Tetrachloride	10.9	10.0	109	66-145
1,2-Dichloroethane (EDC)	10.6	10.0	106	69-131
Benzene	10.4	10.0	104	78-120
Trichloroethene (TCE)	9.78	10.0	98	80-113
1,2-Dichloropropane	10.5	10.0	105	81-117
Bromodichloromethane	11.1	10.0	111	78-130
Dibromomethane	10.6	10.0	106	79-121
2-Hexanone	21.1	20.0	105	51-132
cis-1,3-Dichloropropene	10.7	10.0	107	82-112
Toluene	10.3	10.0	103	83-117
trans-1,3-Dichloropropene	10.5	10.0	105	75-129
1,1,2-Trichloroethane	10.7	10.0	107	75-120
4-Methyl-2-pentanone (MIBK)	22.2	20.0	111	59-126
1,3-Dichloropropane	10.8	10.0	108	76-117
Tetrachloroethene (PCE)	9.81	10.0	98	75-126
Dibromochloromethane	10.6	10.0	106	70-130
1,2-Dibromoethane (EDB)	10.5	10.0	105	73-122

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Liquid

Service Request: L2300075
Date Extracted: 01/15/2003
Date Analyzed: 01/15/2003

**Lab Control Spike Summary
Volatile Organic Compounds**

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Extraction Lot: LWG0300162

**Lab Control Sample
LWG0300162-3**

Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chlorobenzene	9.91	10.0	99	84-112
1,1,1,2-Tetrachloroethane	10.8	10.0	108	80-127
Ethylbenzene	10.2	10.0	102	85-117
Total Xylenes	30.3	30.0	101	83-118
Styrene	10.0	10.0	100	87-115
Bromoform	11.2	10.0	112	65-138
Isopropylbenzene	10.1	10.0	101	80-117
1,1,2,2-Tetrachloroethane	10.6	10.0	106	66-129
1,2,3-Trichloropropane	10.6	10.0	106	69-121
Bromobenzene	10.1	10.0	101	86-114
n-Propylbenzene	9.96	10.0	100	74-125
2-Chlorotoluene	9.83	10.0	98	75-117
4-Chlorotoluene	9.95	10.0	100	75-120
1,3,5-Trimethylbenzene	9.95	10.0	100	76-122
tert-Butylbenzene	9.88	10.0	99	72-122
1,2,4-Trimethylbenzene	9.74	10.0	97	74-119
sec-Butylbenzene	9.97	10.0	100	66-126
1,3-Dichlorobenzene	9.58	10.0	96	85-110
4-Isopropyltoluene	9.97	10.0	100	71-125
1,4-Dichlorobenzene	9.88	10.0	99	86-109
n-Butylbenzene	10.0	10.0	100	61-132
1,2-Dichlorobenzene	9.88	10.0	99	87-111
1,2-Dibromo-3-chloropropane	21.1	20.0	106	58-128
1,2,4-Trichlorobenzene	9.67	10.0	97	80-114
1,2,3-Trichlorobenzene	9.92	10.0	99	80-113
Naphthalene	9.38	10.0	94	62-122
Hexachlorobutadiene	10.4	10.0	104	68-122
Methyl tert-Butyl Ether	20.4	20.0	102	68-119
1,1,2-Trichlorotrifluoroethane	9.00	10.0	90	67-134
Vinyl Acetate	29.5	20.0	148	74-168

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Extracted: 01/16/2003
Date Analyzed: 01/16/2003

**Lab Control Spike Summary
Volatile Organic Compounds**

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L

Basis: NA

Level: Low

Extraction Lot: LWG0300180

Lab Control Sample

LWG0300180-3

Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Dichlorodifluoromethane	10.5	10.0	105	68-164
Chloromethane	11.4	10.0	114	71-140
Vinyl Chloride	9.86	10.0	99	75-126
Bromomethane	8.82	10.0	88	54-151
Chloroethane	9.48	10.0	95	78-129
Trichlorofluoromethane	9.10	10.0	91	64-143
Acetone	18.6	20.0	93	62-152
1,1-Dichloroethene	8.10	10.0	81	70-119
Carbon Disulfide	18.9	20.0	95	73-127
Methylene Chloride	9.12	10.0	91	65-127
trans-1,2-Dichloroethene	9.32	10.0	93	81-123
1,1-Dichloroethane	10.6	10.0	106	85-128
2-Butanone (MEK)	21.1	20.0	106	65-126
2,2-Dichloropropane	10.5	10.0	105	75-140
cis-1,2-Dichloroethene	9.81	10.0	98	82-121
Chloroform	10.2	10.0	102	82-123
Bromochloromethane	9.95	10.0	100	77-129
1,1,1-Trichloroethane (TCA)	9.39	10.0	94	72-127
1,1-Dichloropropene	9.89	10.0	99	77-123
Carbon Tetrachloride	10.5	10.0	105	66-145
1,2-Dichloroethane (EDC)	10.3	10.0	103	69-131
Benzene	10.1	10.0	101	78-120
Trichloroethene (TCE)	9.42	10.0	94	80-113
1,2-Dichloropropane	10.3	10.0	103	81-117
Bromodichloromethane	10.8	10.0	108	78-130
Dibromomethane	10.3	10.0	103	79-121
2-Hexanone	20.8	20.0	104	51-132
cis-1,3-Dichloropropene	10.5	10.0	105	82-112
Toluene	9.97	10.0	100	83-117
trans-1,3-Dichloropropene	10.2	10.0	102	75-129
1,1,2-Trichloroethane	10.2	10.0	102	75-120
4-Methyl-2-pentanone (MIBK)	21.3	20.0	107	59-126
1,3-Dichloropropane	10.5	10.0	105	76-117
Tetrachloroethene (PCE)	9.14	10.0	91	75-126
Dibromochloromethane	10.4	10.0	104	70-130
1,2-Dibromoethane (EDB)	9.82	10.0	98	73-122

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Brown & Caldwell Consulting
Project: Webb of California/22946.100
Sample Matrix: Water

Service Request: L2300075
Date Extracted: 01/16/2003
Date Analyzed: 01/16/2003

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L

Basis: NA

Level: Low

Extraction Lot: LWG0300180

Lab Control Sample

LWG0300180-3

Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chlorobenzene	9.78	10.0	98	84-112
1,1,1,2-Tetrachloroethane	10.8	10.0	108	80-127
Ethylbenzene	9.92	10.0	99	85-117
Total Xylenes	29.7	30.0	99	83-118
Styrene	9.87	10.0	99	87-115
Bromoform	11.4	10.0	114	65-138
Isopropylbenzene	9.89	10.0	99	80-117
1,1,2,2-Tetrachloroethane	10.1	10.0	101	66-129
1,2,3-Trichloropropane	10.2	10.0	102	69-121
Bromobenzene	9.97	10.0	100	86-114
n-Propylbenzene	9.70	10.0	97	74-125
2-Chlorotoluene	9.69	10.0	97	75-117
4-Chlorotoluene	9.72	10.0	97	75-120
1,3,5-Trimethylbenzene	9.58	10.0	96	76-122
tert-Butylbenzene	9.45	10.0	95	72-122
1,2,4-Trimethylbenzene	9.54	10.0	95	74-119
sec-Butylbenzene	9.57	10.0	96	66-126
1,3-Dichlorobenzene	9.53	10.0	95	85-110
4-Isopropyltoluene	9.72	10.0	97	71-125
1,4-Dichlorobenzene	9.57	10.0	96	86-109
n-Butylbenzene	9.73	10.0	97	61-132
1,2-Dichlorobenzene	9.60	10.0	96	87-111
1,2-Dibromo-3-chloropropane	20.5	20.0	103	58-128
1,2,4-Trichlorobenzene	9.33	10.0	93	80-114
1,2,3-Trichlorobenzene	9.55	10.0	96	80-113
Naphthalene	9.12	10.0	91	62-122
Hexachlorobutadiene	9.88	10.0	99	68-122
Methyl tert-Butyl Ether	19.6	20.0	98	68-119
1,1,2-Trichlorotrifluoroethane	8.47	10.0	85	67-134
Vinyl Acetate	30.1	20.0	150	74-168

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

6925 Canoga Ave. • Canoga Park, CA 91303 • (818) 587-5550 • 800-695-7222 x02 • FAX (818) 587-5555

 PAGE 1 OF 1

SR #

 CAS Contact 12300075

Project Name <u>Webb of California</u>		Project Number <u>22946.100</u>	ANALYSIS REQUESTED (Include Method Number and Container Preservative)																	
Project Manager <u>Mike Crews</u>	Report CC	PRESERVATIVE																		
Company/Address <u>16735 Von Karman Ave Ste 200</u> <u>Irvine, CA 92606</u>		NUMBER OF CONTAINERS	TPH Gas 8015m (purgeable)	TPH Diesel 8015m (extractable)	Fuel Char. BTX MTBE	Total Petroleum Hydrocarbons 418.1	Halogenated Volatiles 802	VOA by GCMS 8260	Oxygenates 8242 Semi VOA by GCMS 8270	PCBs 8082	PCBs 8082 / 608	CCR Metals (17) 8010 / 8020	7000 / 200 / 200.8	3260 B						
Phone # <u>949 600 1070</u>	FAX# <u>949 474 0940</u>	Preservative Key	0. NONE																	
Sampler's Signature <u>Susan Titus</u>		1	1. HCl																	
Sampler's Printed Name <u>Susan Titus</u>		2	2. HNO ₃																	
		3	3. H ₂ SO ₄																	
		4	4. NaOH																	
		5	5. Zn. Acetate																	
		6	6. MeOH																	
		7	7. NaHSO ₄																	
		8.	Other _____																	
		REMARKS/ ALTERNATE DESCRIPTION																		
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	TIME	MATRIX																
trip blank	1	1-10-03		water	2														hold	
MW-2-53'	2	1-10-03	0903	water	3														x	
MW-3-69'	3	1-10-03	0944	water	3														x	
MW-1-69'	4	1-10-03	1017	water	3														x	
MW-1-69' - D	5	1-10-03	1017	water	1														x	
MW-4-69'	6	1-10-03	1048	water	3														x	
MW-5-53'	7	1-10-03	1048	water	3														x	
					11117															
SPECIAL INSTRUCTIONS/COMMENTS					TURNAROUND REQUIREMENTS				REPORT REQUIREMENTS				INVOICE INFORMATION							
Please call Mike Crews or Susie Titus w/any questions. Please fax results when available					RUSH (SURCHARGES APPLY)				I. Results Only				PO#							
					PLEASE CIRCLE WORK DAYS				II. Results + QC Summaries (LCS, DUP, MS/MSD as required)				BILL TO:							
					1	2	3	III. Results + QC and Calibration Summaries												
					STANDARD <u>5 days</u>				IV. Data Validation Report with Raw Data											
					REQUESTED FAX DATE				V. Specialized Forms / Custom Report											
					REQUESTED REPORT DATE				Edata Yes No											
See QAPP <input type="checkbox"/>		SAMPLE RECEIPT: CONDITION/COOLER TEMP:		CUSTODY SEALS: Y N		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY								
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY						
Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>	Signature <u>Susan Titus</u>						
Printed Name <u>Susan Titus</u>	Printed Name <u>CAS</u>	Printed Name <u>Susan Titus</u>	Printed Name <u>CAS</u>	Printed Name <u>Susan Titus</u>	Printed Name <u>CAS</u>	Printed Name <u>Susan Titus</u>	Printed Name <u>CAS</u>	Printed Name <u>Susan Titus</u>	Printed Name <u>CAS</u>	Printed Name <u>Susan Titus</u>	Printed Name <u>CAS</u>	Printed Name <u>Susan Titus</u>	Printed Name <u>CAS</u>	Printed Name <u>Susan Titus</u>						
Firm <u>Bramacaldwell</u>	Firm <u>11/10/03 1430</u>	Firm <u>11/10/03 1710</u>	Firm <u>11/10/03 1710</u>	Date/Time <u>11/03 0230</u>	Date/Time <u>11/03 0230</u>	Date/Time <u>11/10/03 1710</u>	Date/Time <u>11/10/03 1710</u>	Date/Time <u>11/10/03 1710</u>	Date/Time <u>11/10/03 1710</u>	Date/Time <u>11/10/03 1710</u>	Date/Time <u>11/10/03 1710</u>	Date/Time <u>11/10/03 1710</u>	Date/Time <u>11/10/03 1710</u>	Date/Time <u>11/10/03 1710</u>						

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July 30, 2003

ORANGE REGIONAL WATER
QUALITY CONTROL BOARD
100 W. 4TH STREET
SUITE 1000
LOS ANGELES, CA 90013

BROWN AND
CALDWELL

Mr. Steven Hariri, P.E.
Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, California 90013

12/22946-100

Subject: Groundwater Sampling Report - July 2003
5030 Firestone Boulevard and 9301 Rayo Avenue
South Gate, California

Dear Mr. Hariri:

On behalf of Jervis B. Webb Company of California (Webb of California), Brown and Caldwell is submitting this report for environmental activities completed at 5030 Firestone Boulevard and 9301 Rayo Avenue, South Gate, California (site) (Figure 1). This report summarizes the activities, including groundwater monitoring and sampling performed at the site, completed on June 30, 2003 and July 11, 2003.

BACKGROUND

Numerous subsurface investigations have been performed at the subject site since 1998. Erler and Kalinowski, Inc. (EKI) completed several investigations at the site between 1998 and 2001 that included nine CPT borings, 37 soil gas probe locations, 19 soil borings, nine PIPP groundwater samples, five groundwater monitoring wells, and collection and analysis of 78 soil samples. Additionally, EKI operated and maintained a soil vapor extraction (SVE) system at the site from March 2000 until October 2001 removing approximately 177 pounds of volatile organic compounds (VOCs) from the soil, primarily trichloroethylene (TCE).

IT Corporation advanced five soil borings to determine how effectively the SVE system had removed soil contamination. IT Corporation collected 40 additional soil samples, and analyzed them for VOCs. Subsequently, IT Corporation submitted a Soil Closure Report dated October 3, 2001 to the Los Angeles Regional Water Quality Control Board (RWQCB) and obtained soil closure for the site in a letter issued by the RWQCB dated January 23, 2002.

Quarterly groundwater sampling has been conducted at the site by EKI from March 1998 until June 2001. The RWQCB reduced sampling frequency from quarterly to semi-annually in a letter dated November 8, 2001. IT Corporation conducted the first semi-annual sampling event in January 2002. Consequent semi-annual sampling events were conducted by Brown and Caldwell on July 2, 2002 and January 10, 2003.

Brown and Caldwell performed the current groundwater sampling event on June 30, 2003 and July 11, 2003. Groundwater elevation measurements, groundwater quality data, and analytical results for the current and historic sampling events are provided in Tables 1 & 2 and Appendix A & B of this report.

COMPLETED SCOPE OF WORK

The scope of work performed during this reporting period included collection and analysis of water samples collected from groundwater monitoring wells located on and off-site (Figure 2). Water samples were collected using both a low-flow method and passive diffusion bags (PDBs) so that a comparison can be made regarding the duplicity of concentrations using these two methods. Groundwater sampling using PDBs was approved by the RWQCB in correspondence dated January 2002. All work was performed under the supervision of a California Registered Geologist. Work was performed under a site-specific health and safety plan (HASP) prepared by Brown and Caldwell.

GROUNDWATER SAMPLING

Passive Diffusion Bag Sampling

Brown and Caldwell personnel performed the groundwater monitoring and sampling event on June 30, 2003 and July 11, 2003. The June field activities included depth-to-water measurements, total well depth measurements, and the installation of PDBs in groundwater monitoring wells MW-1 through MW-5 (Figure 2). Prior to the installation of the PDBs, depth-to-water and total well depth were measured in each well to the nearest hundredth of a foot using an electronic water level indicator. The probe was decontaminated between wells with Alconox™ detergent solution and tap water rinse followed by a final rinse with deionized water. The surveyed north side of the top edge of each well was used as a measuring point reference.

The PDBs were provided by the laboratory, Columbia Analytical Services (Columbia), pre-filled with deionized water. The bags were suspended at the target depth in their respective wells (one bag per well). The target depths were at either the middle or bottom of the wells and were determined based on the highest concentrations reported during previous PDB groundwater sampling events conducted by IT and Brown and Caldwell. The PDBs remained in monitoring wells MW-1 through MW-5 for eleven days, thus allowing them to equilibrate with the surrounding groundwater in the wells.

On July 11, 2003 the PDBs were removed from each well. At the time of sampling, the PDBs were removed from the wells (MW-1 through MW-5) and groundwater samples were collected directly from the PDBs. The groundwater samples were containerized in pre-cleaned laboratory supplied bottles. A total of 5 groundwater samples were collected on July 11, 2003 from the PDBs. No duplicate sample was collected due to an insufficient amount of available sample water.

All PDB samples were labeled with the site location, sample identification number, date and time of collection, sampler's initials, and logged on a chain-of-custody form. One set of trip blank samples was also submitted to the laboratory for analysis with the collected PDB samples. All samples were stored in an ice-chilled cooler at approximately 4 degrees Celsius. The PDB groundwater samples were submitted to Columbia, a California certified laboratory, under Brown and Caldwell chain-of-custody protocols.

PDB groundwater samples were analyzed for VOCs using United States Environmental Protection Agency (USEPA) method 8260B. The laboratory analytical results of the groundwater samples are provided in Appendix A of this report.

Low-flow Sampling

Immediately after the PDBs were removed and sampled on July 11, 2003, low-flow groundwater purging and sampling was performed. Prior to purging and sampling, depth-to-water and total well depth were measured in each well to the nearest hundredth of a foot using an electronic water level indicator. The probe was decontaminated between uses with Alconox™ detergent solution and tap water rinse followed by a final rinse with deionized water. The surveyed north side of the top edge of each well was used as a measuring point reference.

Each well was purged using a downhole pump, following low-flow sampling methodology, until the field parameters (pH, temperature, and conductivity) stabilized within ten percent of the last three readings. This ensures that the collected water sample is representative of the formation groundwater. The pump intake was placed at approximately the same depth as the PDB. Depth to groundwater, field groundwater quality parameters, and other pertinent information were recorded on Well Monitoring and Purging Data Forms, which are presented in Appendix B.

During the sampling, wells were purged using a submersible pump. Purged groundwater from the wells (MW-1 through MW-5) and water used for equipment decontamination (decon) (approximately 30 gallons) was temporarily stored in a labeled, 55-gallon drum and left on-site. The drum containing the groundwater and decon water will be removed from the site and transported to a California licensed disposal site by Belshire Environmental Services, Inc. A copy of the manifest will be provided under separate cover. Used personal protection equipment (PPE) was double bagged and placed in a municipal refuse dumpster.

Following purging, groundwater samples were collected directly from the pump discharge hose and containerized in pre-cleaned laboratory supplied bottles. A dedicated pump discharge hose was used at each well to minimize the possibility of cross-contamination. All samples were labeled with the site location, sample identification number, date and time of collection, sampler's initials, and logged on a chain-of-custody form. For laboratory quality control purposes, one duplicate sample ('MW-1 DUP') from MW-1 was collected during the groundwater-sampling event. One trip blank sample was also submitted to the laboratory with the collected

samples. All samples were stored in an ice-chilled cooler at approximately 4 degrees Celsius. The groundwater samples were submitted to Chemical & Environmental Laboratories, Inc. (CEL), a California certified laboratory, under Brown and Caldwell chain-of-custody protocols.

Groundwater samples collected using low flow methodology were analyzed for VOCs using USEPA method 8260B, arsenic, barium, total chromium, molybdenum, and zinc using USEPA method 6010B, and hexavalent chromium using USEPA method 7196. The sample water collected for the metals analysis was field filtered at the time of collection.

RESULTS

Site Hydrogeology

Groundwater elevations within each well (MW-1 through MW-5) were monitored on June 30, 2003 and July 11, 2003. Groundwater elevations ranged from 56.56 feet above mean sea level (ft. msl) in well MW-4 to 59.57 ft. msl in well MW-2. The water surface elevations recorded during the June/July 2003 sampling event indicate the potentiometric surface has risen in elevation since the December 2002/January 2003 semi-annual event, with an average increase of 0.28 feet. The water surface elevation in all five wells has increased since January 2003 with a maximum increase of 0.44 feet observed in well MW-3.

The direction of groundwater flow on June 30, 2003 and July 11, 2003 was southeasterly, which is consistent with previous sampling events. Figure 3 depicts the groundwater potentiometric surface on July 11, 2003. The gradient averages approximately 0.63 vertical feet per 100 lateral feet (0.0063 ft/ft). Depth to groundwater and groundwater elevations for the monitoring wells are presented in Table 1.

Groundwater Sampling

VOCs. Groundwater samples collected from all five wells using PDBs and low-flow methods (MW-1 through MW-5) were analyzed for VOCs. Current and historical analytical data from previous sampling events are presented in Table 2. Detected concentrations of trichloroethylene (TCE) from the current event for both methods are similar to those reported during previous events and ranged from 0.54 micrograms per liter ($\mu\text{g/l}$) in MW-4 to 25,000 $\mu\text{g/l}$ in MW-1. The concentrations reported for the samples collected from the PDBs are consistent with prior PDB and are generally higher than those from the low-flow samples. Overall, the VOC concentrations from each well (using PDB and low flow) are generally consistent.

Figure 4 represents a map of TCE concentrations for both PDBs and low-flow methods from the July 2003 sampling event. Based on this data, the TCE plume size and shape have remained stable since groundwater sampling commenced in 1998. Various chlorinated VOC degradation compounds were detected in the five wells, including cis-1,2-DCE (high of 340 $\mu\text{g/l}$ in MW-5), trans-1,2-DCE (high of 59.3 $\mu\text{g/l}$

in MW-1), and 1,1-DCE (high of 72.7 µg/l in MW-1). Benzene was detected at 3.4 µg/l in the PDB sample collected from MW-4.

Metals. Groundwater samples collected using the low-flow method during the July 2003 event were also analyzed for dissolved metals. A summary of the metal analytical results is provided in Table 3. Dissolved metals detected during this sampling event include arsenic (high of 0.214 milligrams per liter (mg/l) in MW-1), barium (high of 0.023 mg/l in MW-5), molybdenum (high of 0.945 mg/l in MW-2), and zinc (high of 0.223 mg/l in MW-4). Hexavalent chromium and total chromium were not detected in any well. Arsenic has been measured in soils previously at the site, and has been determined to be naturally occurring. These arsenic levels are within normal background levels (naturally occurring) for Southern California soils according to a background trace metals report published by the California Department of Toxic Substances Control (1992) and are consistent with those levels found previously at the Rayo portion of the site. The arsenic levels are also consistent with background arsenic levels observed locally, including the nearby Cooper Drum Company site (9316 South Atlantic Avenue, South Gate (USEPA 1999)) and the Proposed Park Avenue Primary Center (SE corner of Florence Avenue and Wilcox Avenue in Cudahy (IT 2001)). This data supports the arsenic concentrations in groundwater to be part of the natural system at this site.

A summary of the VOC and metal analytical results from the June 2003/July 2003 sampling event is presented in Tables 2 & 3, respectively. A copy of the laboratory analytical report and chain-of-custody forms are presented as Attachment A.

SUMMARY

The following provides a summary of results based on data collected during the July 2003 sampling event:

- Five existing groundwater monitoring wells were sampled and analyzed for VOCs using PDBs. The same wells were sampled and analyzed for VOCs and metals using a low-flow method so that a comparison of results can be made for these two sampling methods.
- Groundwater surface elevations have increased an average of 0.28 feet since the last sampling event.
- Groundwater flow direction is to the southeast, which is consistent with previous sampling events.
- The TCE plume size and shape remains consistent with previous sampling events, suggesting the plume is stable.
- VOC and metal concentrations from the July 2003 event are similar to previous events, with the highest detected concentrations observed in well MW-1.
- Hexavalent chromium was not detected in any well.

FUTURE SAMPLING

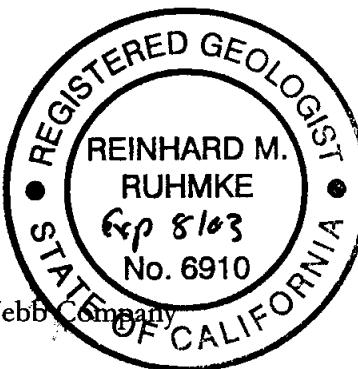
Data from the July 2003 sampling event and previous sampling events suggests the plume has remained stable over several events. Metal concentrations from the July 2003 sampling event are consistent with all previously reported metal concentrations since March 2001 and are considered to be equivalent to background concentrations. Based on the data collected to date, Webb of California proposes that groundwater sampling be conducted on an annual basis (beginning July 2004) and that the water samples be collected using PDBs and analyzed for VOCs only. If the RWQCB does not agree with this change in the sampling schedule, please contact the undersigned at (714) 689-4846 so that a meeting can be arranged to discuss this site. Otherwise, please provide correspondence that approves our request for the modification in the sampling. Webb of California appreciates a response by November 1, 2003.

Very truly yours,
BROWN AND CALDWELL



Reinhard Ruhmke, R.G., C.HG.
Principal Geologist

cc: Michael Farley – Jervis B. Webb Company
Project file



Encl. Figures 1-4
Tables 1, 2 and 3
Appendix A: Laboratory Analytical Reports and Chain of Custody Forms
Appendix B: Well Monitoring and Purging Data Forms

REFERENCES

- Brown and Caldwell, 2003, Semi-Annual Groundwater Sampling Report – January 2003,
5030 Firestone Boulevard and 9301 Rayo Avenue, South Gate, California,
Consultant Report dated January 22, 2003.
- Brown and Caldwell, 2002, Semi-Annual Groundwater Sampling Report – July 2002,
5030 Firestone Boulevard and 9301 Rayo Avenue, South Gate, California,
Consultant Report dated July 30, 2003.
- The IT Group 2002, IT Corporation, Semi-Annual Groundwater Sampling Report – First Semester 2002, Jervis B. Webb Company of California, South Gate, California,
Consultant Report dated February 28, 2002.
- The IT Group 2001, IT Corporation, Soil Closure Report, Jervis B. Webb Company of California, South Gate, California, SLIC File No. 744, Consultant Report dated October 3, 2001.

B R O W N A N D
C A L D W E L L

TRANSMITTAL MEMORANDUM

To: Mr. Steven Hariri, P.E.
Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, California 90013

Date:	7/30/03	File No:	22946
Subject:	Jervis B. Webb Company		
Contract No:	22946		
Equipment No:			
Spec. Ref:			
Submittal No:			

WE ARE SENDING TO YOU:		<input checked="" type="checkbox"/> Attached	or	<input type="checkbox"/> Under separate cover via Make a selection the following items:
<input type="checkbox"/> Shop Drawings	<input type="checkbox"/> Prints	<input type="checkbox"/> Plans	<input type="checkbox"/> Samples	
<input type="checkbox"/> Copy of letter	<input type="checkbox"/> Change Order	<input type="checkbox"/> Other:	<input type="checkbox"/> Specifications	RECEIVED 3101 AM 1-9-03

THESE ARE TRANSMITTED AS CHECKED BELOW:

- For approval
- For your use
- As requested
- For review and comment
- With submittal review action noted

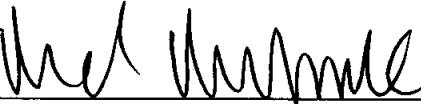
SUBMITTAL REVIEW ACTIONS:

- No exceptions taken
- Make revisions
- Amend and resubmit
- Rejected--see Remarks
- None

Copies	Date	No.	Description
2	7/30/03	22946	Semi-Annual Groundwater Sampling Report - July 2003

REMARKS:

cc: Michael Farley


Reinhard Ruhmke

Suite 100, 400 Exchange, Irvine, California, 92602
Phone: (714) 730-7600 | FAX: (714) 734-0940

If enclosures are not as noted, kindly notify us at once

STAT-040-05/13/91

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